



**PROCESSED FRUITS &
VEGETABLE PRODUCTS
IN QATAR,
2020**

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2020



CEO'S MESSAGE



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Al-Sowaidi
Acting CEO

"Qatar's food production industry contributed nearly 10% of the country's domestic consumption. The local production of fruit and vegetable products has been low in Qatar. However, after the blockade, there has been better focus on increasing domestic food production and this is reflected in the fruit and vegetable processing sector as well. According to the latest statistics published by the Planning and Statistics Authority (PSA), the manufacturing of food products was valued at QAR 2,558 million and the gross value added by this sector grew to QAR 1,007 million in 2018."

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Between 2012 and 2019, the demand increased for juices, chips & crisps and processed vegetables at a CAGR of 7.2%, 6.5% and 5.3% (in terms of volume) respectively. However, a decrease in demand was seen for jams and jellies during the same period at a CAGR of -3.1%.

As part of Qatar's initiative to promote private sectors' entrepreneurship (particularly the small and medium-sized enterprises), which are vital tributaries to the country's aspired, diversified and sustainable economy. Qatar Development Bank (QDB) plays a vital role in this domain where it puts a great deal of time and effort into promoting local entrepreneurship and facilitating the formation of new ventures on a sound and viable business basis.

QDB's role is not limited to financing enterprises, as it provides SMEs and entrepreneurs with non-financial support services throughout all the phases of their businesses to achieve its vision "to develop and empower Qatari entrepreneurs and innovators to contribute in the diversification of the Qatari economy."

This report covers the processed fruits and vegetable products sector in Qatar, which is segregated into four distinct product segments, viz. 1) Juices, 2) Jams & Jellies, 3) Potato chips & crisps and 4) Packaged vegetables. Qatar, which was traditionally reliant on imports of almost all major products under this sector has witnessed increasing participation from local establishments in subcategories like fruit juice, chips and crisps and packaged vegetables.

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ACRONYMS AND ABBREVIATIONS

CAGR	Compounded Annual Growth Rate
GCC	Gulf Cooperation Council
GSO	Gulf Standardization Organization
GDP	Gross Domestic Product
GOIC	Gulf Organization for Industrial Consulting
HS Code	Harmonized System Code
ISIC	International Standard Industrial Classification
ITC	International Trade Centre
Kg	Kilogram
KSA	Kingdom of Saudi Arabia
MOCI	Ministry of Commerce and Industry
PSA	Planning and Statistics Authority
SWOT	Strengths, Weaknesses, Opportunities and Threats
QAR	Qatari Riyal
QDB	Qatar Development Bank
SME	Small and Medium Enterprises
UAE	United Arab Emirates
UK	United Kingdom
USD	United States Dollar
USA	United States of America

The demand for processed fruits and vegetables has increased substantially with rapid growth in Qatar's economy, driven by growth in population, urbanization, changing lifestyles, growing affluence and tourism. Qatar is amongst the most urbanized countries among the GCC states. Urban lifestyles have led to a change in food needs and eating patterns resulting in a shift towards packaged and fast food. This has helped the country's food & beverage market which in turn will drive the growth of the food processing sector including that of processed fruits and vegetables. According to the latest statistics published by the Planning and Statistics Authority (PSA), the manufacturing of food products was valued at QAR 2,558 million and the gross value added by this sector grew to QAR 1,007 million in 2018.

This report covers activities related to products prepared by processing of fruits and vegetables classified under ISIC (Revision 4) code 1030. These products can be consumed by consumers either at home or at institutions such as hotels, restaurants and cafes. This sector comprises a range of products that can be categorized under the following segments, namely 1) juices, 2) jams & jellies, 3) chips & crisps and 4) processed vegetables.

JUICES

The juices market in Qatar was estimated at 21.7 million liters in terms of volume and was valued at QAR 103.3 million in 2019. Between 2012 and 2019, the demand increased from 13.3 million liters to 21.7 million liters, growing at a CAGR of 7.2%, while in terms of value, it increased from QAR 52 million in 2012 to QAR 103.3 million in 2019, at a CAGR of 10.4%. Juice exports as of 2019 were negligible and account for less than 0.2% in terms of volume and 0.1% in terms of value of the domestic production. The juices market in Qatar is broadly categorized into locally produced with 40% market share and imported products with 60% market share. In terms of volume, almost 55% of the market is dominated by chilled fruit juices while the remaining 45% is from long-life fruit juices.

The top four juice manufacturers account for approximately 85% share of the domestic market in terms of value and volume. Baladna is the market leader with 25.2% market share, closely followed by Dandy with 23.9% market share in terms of volume.

The demand for juices is estimated to grow from 21.7 million liters in 2019 to 28.8 million liters in 2024 at a CAGR of 5.8%, while in terms of value it is forecast to grow at a CAGR of 8% from QAR 103.3 million in 2019 to QAR 152 million in 2024.

JAMS & JELLIES

There are currently no domestic producers of Jams & Jellies in Qatar. The overall market size is represented entirely by imports which amounted to 1,491 tons in terms of volume and was valued at QAR 15.5 million in 2019. Between 2012 and 2019, the jams & jellies market declined from 1,860 tons in 2012 to 1,491 tons in 2018, representing a decline of 3.1%, while in terms of value, it decreased from QAR 19.8 million in 2012 to QAR 15.5 million in 2019, representing a decline of 3.4%.

All the products under the jams & jellies category are predominantly imported from Turkey, India, France and Lebanon. The relatively small size of Qatar's market has resulted in lack of domestic manufacturing facilities in the country. To remain viable, local manufacturing companies would need to export their products, especially in the regional markets. However, intense competition from well-established players from the Middle East region as well as from countries like Turkey and India and lack of locally produced raw materials would make it difficult for local manufacturers to thrive.

The total jams & jellies market in Qatar is estimated to grow to QAR 1,706 tons, valued at QAR 19.7 million by 2024, growing at a CAGR of 2.7% in terms of volume and 4.8% in terms of value.

CHIPS AND CRISPS

The chips and crisps market in Qatar was estimated at 6,602 tons in terms of volume, valued at QAR 139 million in 2019. Between 2012 and 2019, the market increased from 4,255 tons in 2012 to 6,602 tons in 2019, growing at a CAGR of 6.5%, while in terms of value, it increased from QAR 82 million in 2012 to QAR 139 million in 2019, at a CAGR of 8%.

The chips and crisps sector can be categorized into 1) domestically produced, and 2) imported products. In 2019, the domestic segment accounted for 28% market share (1,868 tons) in terms of volume and 36% share (QAR 49.4 million) in terms of value, while the imported segment accounted for 72% share (4,734 tons) in terms of volume and 64% (QAR 89.5 million) in terms of value.

Prior to the blockade in 2017, there were only two local manufacturers (Qatar Food Industries- Qatar Pafki and Conserved Foodstuffs- Khazan) operating in Qatar, however, as of 2020, there are a total of four local manufacturers, thus

indicating the addition of two new manufacturers (Munah Food Stuff and Wholesome Oasis) operating in the market. Local manufacturers focus on the manufacture of corn-based as well as potato-based chips and crisps. Most of the local production is corn-based products, accounting for an estimated 65% of the local production, whereas potato-based products account for the remaining 35% share of the production.

PROCESSED VEGETABLES

The processed vegetables demand was estimated at 36,359 tons in terms of volume and was valued at QAR 221.7 million in 2019. Between 2012 and 2019, the market increased from 25,313 tons in 2012 to 36,359 tons in 2019, growing at a CAGR of 5.3%, while in terms of value, it increased from QAR 128 million in 2012 to QAR 221.7 million in 2019, at a CAGR of 8.2%. Processed vegetables include three main product categories, 1) Vegetables that are Canned or Prepared or Preserved using multiple processing techniques, 2) Frozen Vegetables and 3) Packaged Vegetables. Frozen Vegetables is the largest segment with 43% volume share (15,781 tons) and 40% value share (QAR 89.4 million) in 2019, followed by Canned/ Prepared/ Preserved Vegetables with 34% volume share and Packaged Vegetables with 23% volume share.

Processed vegetable market in Qatar mainly depends on imports from other countries. The level of processing of vegetables into cut and packed or frozen or canned food items in Qatar is currently very small and at its nascent stage of development given the limitations of cultivation of crops in the country. Historically between 2017 and 2019, a declining trend was observed in the market for processed vegetables. Three key factors could be considered as the reasons for this decline, 1) Traditional preference of consumers who would choose to buy fresh produce instead of processed vegetables, 2) Reduction in imports from blockading countries, and 3) Qatar's efforts to increase its self-sufficiency by cultivating fruits and vegetables locally, thus prompting consumers to purchase local fresh produce, have impacted the overall demand for processed vegetables during this period.

In the domestic segment, there are currently 3 local manufacturers (Al Manal Foods Factory, Al Raed Food Processing Factory and Themar Factory) engaged in local processing of vegetables and their production is limited to frozen potatoes, tomato pastes/ketchup, pickles and packaged vegetables.

1. INTRODUCTION



Qatar, with a per capita GDP (at current prices) of QAR 252,360 in 2018, is among the richest countries in the world. Its economy is highly dependent on oil and gas industry which accounted for around 32% of GDP and 82% of revenues in 2017.

With rapid growth in Qatar's economy, the demand for food is also increasing, driven by growth in population, urbanization, changing lifestyles, growing affluence and tourism. Qatar is amongst the most urbanized countries in the GCC states. Urban lifestyles have led to a change in food needs and eating patterns resulting in a shift towards packaged and fast food. This has helped the country's food & beverage market which in turn will drive the growth of food processing sector including that of processed fruits and vegetables.

Food production in Qatar

Qatar's food production industry contributed nearly 10% of the country's domestic consumption. The local production of fruit and vegetable products has been low in Qatar. However, after the blockade, there has been better focus on increasing domestic food production and this is reflected in the fruit and vegetable processing sector as well. Baladna, for instance has started domestic production of fruit juices in Qatar. This trend is likely to continue in future leading to increase in the number of local production units involved in fruit and vegetable processing. The number of establishments by activities in Qatar's food industry are outlined in the table below.



Table 1: Qatar food industry segments

Qatar Food Industry, Number of Factories						
Segment	License Type	2016	2017	2018	2019	2020
Processing of fruits and nuts	Industrial Registration	0	0	0	1	1
	Under Construction	3	4	4	5	4
Preparation, packaging or preservation of fresh or cooked vegetables and nuts	Industrial Registration	0	1	1	1	1
	Under Construction	3	5	6	6	3
Cooling and freezing fruits and vegetables	Under Construction	-	1	1	2	2
Manufacturing of tomato sauce	Under Construction	1	1	1	2	2
Preparing Jam	Under Construction	-	-	1	1	1
Other activities for processing, preserving, packing and making other products of fruits and vegetables	Industrial Registration	-	-	-	1	1

Source: Ministry of Commerce and Industry (MOCI)

Food import

Qatar depends heavily on food imports to meet its local needs. While local production of fruits and vegetables has increased, further value addition through processing into fruit and vegetable products is low. In the case of certain segments, especially juices and chips, the local production has increased but there is significant scope in other segments such as jams and processed vegetables.

The focus of this report is on "Processing and preserving of fruits and vegetables" as per ISIC (Rev.4) code 1030 and covers four sections (Juices, Jams, Crisps and Chips and Processed Vegetables) described in the Sector Overview section.



1.1 Sector Overview

This report covers activities related to products prepared by processing and preserving of fruits and vegetables classified under ISIC (Revision 4) code 1030. These products can be consumed by customers either at home

or at institutions such as hotels, restaurants, caterers and schools. This sector comprises a range of products that can be categorized under the following segments;

Table 2: Segments under Fruit & Vegetable Products

Segmentation of fruit & vegetable products covered under ISIC 1030	
Segment	Description
Juices	<ul style="list-style-type: none"> Includes juices made from various fruits Made using extracted fruit juice or fruit pulp as the base material Made without the addition of any other ingredients, but some may be diluted with sugar syrup Could be in frozen, not frozen, unconcentrated form Packaged in either tetra pack/bottles (PET)/cans
Jams & Jellies	<ul style="list-style-type: none"> Comprises of jams & jellies made from various fruits Jams made from entire fruit including pulp and packaged in either bottles (PET/Glass)/cans Jellies made from fruits juice or pulp and packaged in either jars/cans Includes marmalade, usually made from citrus fruit, a jellylike concentrate of prepared juice and sliced peel
Chips & crisps	<ul style="list-style-type: none"> Includes chips and crisps made from only potato or corn. Excludes chips and crisps made from any other dough or vegetables. As classified by taste (flavored, plain, salted, sweet chilly, cheese and traditional Arabic labneh, zaatar, etc.) As classified by type (e.g. fried and baked) Packaged in pouches or cans
Processed vegetables	<ul style="list-style-type: none"> Includes vegetables that are Canned or Prepared or Preserved using multiple processing techniques Frozen Vegetables and Packaged Vegetables

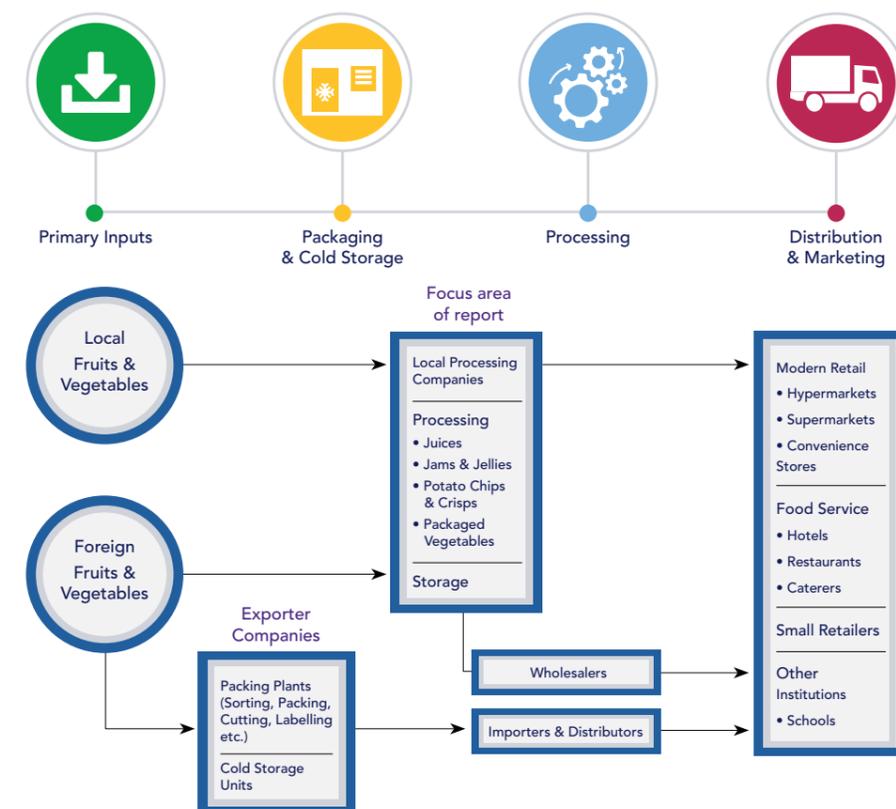
1.2 Fruit & Vegetable Products Value Chain

The fresh and processed fruit and vegetables sector value chain is presented in Figure 1. This value chain includes several segments: primary inputs (including production), packing and storage, processing and

distribution and marketing. The value chain is observed across global markets and is not specific to Qatar.

The Fruit and Vegetables products value chain comprising of several segments, is represented below.

Figure 1. Fruit & Vegetable Products Value Chain



Source: Duke CGGC

Processing of fruit and vegetables involves conversion of raw materials, first into intermediate and then into final products, suitable for consumption. Every stage of processing involves transformation which requires use of equipment and machines.

The fruit and vegetable processing industry in Qatar includes two distinct type of players: Local Manufacturers and Importers/Distributors of foreign companies/brands. Local Manufacturers import main raw materials from various suppliers across the world. Processing of raw material is done in-house and machineries used for processing are generally imported. Once the packaging and labelling is done, finished products

are sold in retail stores (supermarkets and standalone stores) and the Hotels, Restaurants and Cafe (HORECA) industry.

Importers/Distributors import finished products from foreign companies. These products are stored in warehouses and sold in retail markets or HORECA industry directly without any further intermediaries as per the demand.

Although the domestic production of fruit & vegetable products across various segments is on the rise, especially after the blockade, there exists significant potential to increase the share of locally processed finished products that form an integral part of this sector.



1.3 Product Segments

Juices

The juices section of the report covers two main product segments of the juice market namely chilled juices and long-life juices. It does not cover freshly squeezed juiced sold at juice and smoothie shops, restaurant establishments and supermarkets/hypermarkets.

Chilled juices: Chilled juice contains only the natural ingredients from fruit and vegetables and thus the fruit content in chilled juices is almost 100%. The juice is extracted from the fruit and the water content is reduced by evaporating off the water naturally present. The concentrated juice is usually frozen to be able to be shipped off to local importers in Qatar. Fruit juice manufacturers within Qatar then reconstitute the juice by adding back water. Chilled juice has a shelf life of up to one month and with a little to no additives. Depending on the fruit juice content, juices can be further categorized as:

- **Nectar drinks:** Nectar refers to a fruit juice that is too thick to drink, for example, the juice from apricots, peaches or pears. The juice or, more accurately, the purée, must therefore be diluted with water and have sugar added to make it drinkable. The fruit juice content in nectar can vary between 30-90%.
- **Still drinks / Fruit drinks:** Still drinks are namely fruit drinks with maximum 30% fruit content.

Long-life juice

These juices mainly differ from chilled juices in two aspects: First, they undergo a process called Ultra-Heat Treatment (UHT) where the juice must be sterilized under a very high temperature. Second, they are packaged in Tetra Packs. This enables the juice to have a long shelf life and is usually kept for 6 to 12 months while the packaging is kept sealed.



Table 3: HS Codes of Juices

Juices (PSA Definitions)	
20090000	Mixtures of Juices, whether or not containing added sugar or other sweetening matter
20091000	Orange Juice
20091100	Orange Juice, Frozen
20091200	Orange Juice, Not Frozen
20091900	Orange Juice, Other
20092000	Grapefruit Juice
20092100	Grapefruit Juice
20092900	Grape Juice, Other
20093000	Juice of any other single citrus juice
20093110	Lemon Juice
20093190	Other Citrus Juice (Juice of any other single citrus fruit, A Brix value not exceeding 20, Unfermented and not containing added spirit, Other than lemon juice)
20093900	Other Citrus Juice (Juice of any other single citrus fruit)
20094000	Pineapple Juice
20094100	Pineapple Juice
20094900	Pineapple Juice, Other
20095000	Tomato Juice
20096000	Grape juice (including grape must)
20096100	Grape Juice
20096900	Grape Juice, Other
20097000	Apple Juice
20097100	Apple Juice
20097900	Apple Juice, Other
20098000	Juice of any other single fruit & vegetable
20098010	Date Molasses
20098021	Date Juice, Unconcentrated
20098029	Date Juice, Other
20098031	Date Juice, Unconcentrated
20098039	Date Juice, Other



Jams & Jellies

Key products in the jams & jellies segment include:

Jam

Jam is a thick mixture of fruit, sugar, and sometimes pectin that is cooked until the pieces of fruit are soft. The fruit is then puréed, but small, mashed pieces often remain. Jams are characterized by flavor, texture and sweetness.

Jelly

Jelly is a clear spread made from fruit juice, sugar and sometimes pectin.

Marmalade

Marmalade is a preserve that contains pieces of citrus fruit peel.



Table 4: HS Codes Jams & Jellies

Jams & Jellies (PSA Definitions)	
20070000	Jams, Fruit Jellies, Marmalades, Fruit or Nut Puree and Fruit or Nut Pastes, Being Cooked Preparations, whether or not containing added sugar or other sweetening matter
20071010	Jams, Fruit Jellies, Marmalades, Baby Food Preparation
20071020	Jams, Fruit Jellies, Marmalades, Diet Preparations
20071090	Jams, Fruit Jellies, Marmalades, Other
20079110	Marmalades
20079190	Marmalades, Other
20079911	Peach, Jams, Fruit Jellies, Marmalades
20079912	Apricot, Jams, Fruit Jellies, Marmalades
20079913	Apple, Jams, Fruit Jellies, Marmalades
20079914	Watermelon, Jams, Fruit Jellies, Marmalades
20079915	Cherry, Jams, Fruit Jellies, Marmalades
20079916	Strawberry, Jams, Fruit Jellies, Marmalades





Chips & Crisps

Chips & crisps are part of specialty products made either from potatoes or corn that include fries, wedges and cubes. This section of the report includes chips and crisps made from only potato or corn and excludes chips and crisps made from any other dough or vegetables.

Basic Varieties

Basic varieties of chips are salted.

Additional Varieties

Additional varieties of chips are made of various ingredients such as spices, herbs, cheeses, artificial or natural flavors and additives.

Table 5: HS Codes of Chips & Crisps

Chips & Crisps (PSA Definitions)	
19021930	Chips of Potato Flour, Macaroni-Shaped, Not Ready
19059080	Crisps (As Pop Corn, Chips and The Like) Ready for Direct Consumption
19021130	Chips of Potato Flour, Macaroni-Shaped, Not Ready





Processed Vegetables

Key products in the packaged vegetables segment include:

Packaged Vegetables

These include trimmed, peeled, washed and cut vegetables that are subsequently bagged or prepackaged to offer consumers high nutrition, convenience and value while still maintaining freshness. These are offered in a variety of packaging options including plastic bags, containers, trays, boxes and jars.

Frozen Vegetables

Frozen vegetables are available in number of varieties and mixtures as well as various size packages with preserved freshness and taste.

Canned Vegetables

Including partly cooked, pickles and cooked vegetables with sauces.

Table 6: HS Codes of Packaged Vegetables

Packaged Vegetables (PSA Definitions)	
20011000	Cucumbers and Gherkins, Preserved by Vinegar
20019011	Mushrooms and Truffles, Preserved by Vinegar
20019012	Olives and Capers, Preserved by Vinegar
20019013	Green Peppers, Preserved by Vinegar
20019014	Pickles (Assorted), Preserved by Vinegar
20019015	Tomatoes, Preserved by Vinegar
20019019	Other Vegetables, Preserved by Vinegar
20021000	Tomatoes Whole or In Pieces, Prepared or Preserved Nes.
20029010	Tomato Paste, Prepared or Preserved Nes.
20029090	Other, Prepared or Preserved Nes.
20031000	Mushrooms, Prepared or Preserved Nes.
20039000	Other, Prepared or Preserved Nes.
20041000	Potatoes, Frozen & Prepared or Preserved Nes.

Packaged Vegetables (PSA Definitions)	
20049010	Carrots, Frozen & Prepared or Preserved Nes.
20049020	Peas, Frozen & Prepared or Preserved Nes.
20049030	Haricot Beans, Frozen & Prepared or Preserved Nes.
20049040	Kidney Beans, Frozen & Prepared or Preserved Nes.
20049050	Asparagus, frozen & prepared or preserved NES.
20049060	Spinach, Frozen & Prepared or Preserved Nes.
20049070	Okra, Frozen & Prepared or Preserved Nes.
20049080	Mixed Vegetables, Frozen & Prepared or Preserved Nes.
20049090	Mixed Vegetables, Frozen & Prepared or Preserved Nes, Other
20050000	No product description available
20051010	Homogenized vegetables put up for retail sale as infant food or for dietetic purposes: Homogenized vegetables: Baby foods
20051020	Homogenized vegetables put up for retail sale as infant food or for dietetic purposes, in containers: Homogenized vegetables: Diet foods
20051090	Homogenized vegetables put up for retail sale as infant food or for dietetic purposes, in containers: Homogenized vegetables: Others
20052000	Potatoes, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)
20054000	Peas "Pisum Sativum", prepared or preserved otherwise than by vinegar or acetic acid (excl.
20055100	Shelled beans "Vigna spp., Phaseolus spp.", prepared or preserved otherwise than by vinegar
20055900	Unshelled beans "Vigna spp., Phaseolus spp.", prepared or preserved otherwise than by vinegar
20056000	Asparagus, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)
20057000	Olives, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)



Packaged Vegetables (PSA Definitions)	
20058000	Sweetcorn "Zea Mays var. Saccharata", prepared or preserved otherwise than by vinegar or acetic
20059011	Stewed beans, not frozen, ready for direct consumption
20059012	Chick-peas dip (humus with tahina), not frozen, ready for direct consumption
20059013	Vegetables & legumes with sauces, not frozen, ready for direct consumption
20059019	Vegetables & mixtures of vegetables, not frozen, n.e.s., prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059091	Okra, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059092	Horse beans, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059093	Spinach, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059094	Artichokes, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059095	Mixtures of vegetables, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059096	Sauerkraut, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059097	Grape leaf, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption
20059099	Other vegetables, not frozen, prepared or preserved otherwise than by vinegar or acetic acid, & not preserved by sugar, ready for direct consumption, n.e.s.
20059100	Bamboo shoots
20059911	Broad bean, prepared
20059912	Cooked chick peas with tahina
20059913	Vegetables and legumes with sauce
20059919	Other vegetables prepared with sauces

Packaged Vegetables (PSA Definitions)	
20059991	Okra
20059992	Green beans
20059993	Spinach
20059994	Other vegetables prepared with other than by vinegar artichokes, not frozen.
20059995	Mixed vegetables
20059996	Sauerkraut
20059997	Grape leaves
20059999	Other prepared vegetables and plants: confidential



1.4 Raw Materials

Qatar has been traditionally dependent on imports for its food requirements. However, over the past few years, the country has made significant efforts to increase self-sufficiency in fruits and vegetables production. The Ministry of Municipality and Environment has set a target of self-sufficiency of up to 70% in vegetable production by 2023 from current levels of ~25%. To achieve this, the Ministry is allocating land to private companies and importing state of the art technologies to enhance production from existing farms. The result of these initiatives would lead to more local raw material being available for the fruit and vegetables products sector.

Juices

The raw material required for manufacturing fruit juice are fruits/fruit concentrates, sugar, treated water, food coloring, citric acid, fruit flavors and preservatives. Fruits/fruit pulp are the main component of quality fruit juice. Its continuous availability/supply in required quantity is therefore crucial and requires some planning in advance. Fruits/fruit concentrates can be sourced either through local importers or imported from foreign suppliers. The other ingredients could be sourced locally.

Fruit juice is in a ready to drink form and hence its shelf life and protection against microbial growth is important. For this reason, 'tetra pack' packaging has gained enormous popularity compared to other materials for packaging such as plastic and glass bottles, pouch packs with aluminum laminate and tin packs/containers. The shelf life of fruit juice is highly important and depends mainly on the quantity and quality of preservatives and production process that is followed.

Jams & Jellies

The key raw materials required to produce jam, jelly & marmalade are fruits/fruit pulp, sugar, pectin, citric acid, flavors, preservatives, chemicals, food grade coloring, common salt, etc. The finished products are packed in plastic or glass bottles or jars.

Fruit pulp can be sourced either through importers or imported directly from foreign suppliers. Other ingredients could be sourced locally. Locally produced fruits are primarily available for the local fresh fruits market only, since production is much lower than local

consumption and is expensive, thus making it expensive for making jams and jellies. Farming is done for the limited variety of fruits like citrus fruits and area allocated for fruit farming is around 0.64% only, according to 2018 PSA data.

Potato Chips & Crisps

Raw materials required for manufacturing chips & crisps include potatoes, corn meal, salt, edible oil, spices and flavors. The packaging material usually used is consists of multiple layers of polymer materials such as Biaxially Oriented Polypropylene (BOPP) on the inside, low-density polyethylene (LDPE) in the middle, another middle layer of BOPP, and an outer layer of a thermoplastic resin.

Chips manufacturers source their raw materials from local as well as international suppliers depending on the quality and pricing as per the grade and brand specifications of their products.

Processed Vegetables

The raw materials for processed vegetables consist of vegetables in frozen or fresh cut bagged form which are further processed and converted to canned, pickled and prepared vegetables. Agricultural production in Qatar is mainly limited to vegetables such as tomatoes, cucumbers and eggplant and dates. Fruit production is negligible.

Qatar's Ministry of Municipality and Environment aims to reach 70% of self-sufficiency of vegetables by 2023 from the current rate of 24%. The Ministry has stated that sales of local vegetables have surged over three-fold in the second season of 'Qatar Farms Program 2019' compared to the previous season. The sales of vegetables jumped to 8,226 tons in 2019 season compared to 1,969 tons in 2018 season, showing an increase of 318 percent. Of the total local vegetable sales in the country, around 20 percent of the vegetables are being sold under this program. However, these are sale of fresh vegetables and value addition through packaged vegetables is not catered to by domestic production. Processing and packaging of locally produced vegetables is still in its nascent stage, with less than 10% of the local produce undergoing processing and packaging in Qatar.



1.5 HS Codes of Raw Materials

Table 7: HS Codes of Raw Materials for Fruit Products (Juices, Jams & Jellies)



HS Codes of Raw Materials for Fruit Products (Juices, Jams & Jellies)	
08039000	Other, Fresh/Dried Banana
08042010	Fresh Figs
08043000	Pineapples, Fresh or Dried
08044000	Avocados, Fresh or Dried
08045010	Guavas, Fresh
08045020	Mangoes Fresh
08045030	Mangosteens Fresh
08051000	Oranges, Fresh or Dried
08052000	Mandarins (Including Tangerines and Satsumas) Clementine, Wilkings & Similar Citrus Hybrids, Fresh or Dried
08054000	Grapefruit, Fresh or Dried
08055010	Grapefruit Fresh
08061000	Grapes, Fresh
08072000	Papaws (Papayas), Fresh
08081000	Apples, Fresh
08082010	Pears, Fresh
08082020	Quinces, Fresh
08091000	Apricots Fresh
08092000	Cherries, Fresh
08093000	Peaches Fresh
08094000	Plums Fresh
08101000	Strawberries Fresh
08102000	Raspberries, Blackberries, Mulberries and Loganberries, Fresh
08103000	Black, White or Red Currants and Gooseberries, Fresh
08104000	Cranberries, Bilberries and Other Fruits of Genus Vaccinium, Fresh
08105000	Pomegranates, Fresh
08109090	Other Fruit, Nesoi, Fresh
08140000	Peel of Citrus Fruit or Melons (Including Watermelons) Fresh, Frozen, Dried or Provisionally Preserved in Brine, In Sulphur Water Or In Other Preservative Solutions



Table 8: HS Codes of Raw Materials (Chips & Crisps, Packaged Vegetables)

HS Codes of Raw Materials (Chips & Crisps, Packaged Vegetables)	
10059000	Maize or Corn (excluding seed for sowing)
07019000	Potatoes, Fresh or Chilled
07020000	Tomatoes, Fresh or Chilled
07031020	Shallots Fresh or Chilled
07032000	Garlic, Fresh or Chilled
07039000	Leeks & Other Alliaceous Vegetables, Fresh or Chilled
07041000	Cauliflower and Headed Broccoli, Fresh or Chilled
07042000	Brussels Sprouts, Fresh or Chilled
07049000	Cabbages and Other Similar Edible Brassicas, Fresh or Chilled
07061000	Carrots and Turnips, Fresh or Chilled
07069000	Salad Beetroot, Salsify, Celeriac, Radishes and Similar Edible Roots, Fresh or Chilled
07070000	Cucumbers & Gherkins, Fresh or Chilled
07081000	Peas, Shelled or Unshelled, Fresh or Chilled
07082000	Beans, Shelled or Unshelled, Fresh or Chilled
07092000	Asparagus, Fresh or Chilled
07093000	Aubergines (Egg Plants), Fresh or Chilled
07094000	Celery Other Than Celeriac, Fresh or Chilled
07095100	Mushrooms, Fresh or Chilled
07095990	Other Vegetables, Fresh or Chilled
07097000	Spinach Fresh, New Zealand Spinach and Orache Spinach (Garden Spinach) Fresh or Chilled
07099990	Other Edible Vegetables (N.E.S.) Fresh or Chilled
07115100	Mushrooms, Fresh Preserved, Not for Immediate Consumption
07119000	Other vegetables; mixtures of vegetables
07141000	Manioc (Cassava), Fresh or Dried, Whether or Not Sliced or in the Form of Pellets
07142000	Sweet Potatoes, Fresh or Dried, Whether or Not Sliced or in the Form of Pellets

2. JUICES



2.1 Sub-sector Overview

Fresh fruits are the key raw materials in the production of juices that undergo a series of steps, such as sorting, washing, extraction, concentration, reconstitution and pasteurization. The step-by-step process is as follows, however, for majority of local juice manufacturers in Qatar that use fruit concentrates, the process begins at step four:

Table 9: Fruit Juice Making Process

Step 1	The incoming raw materials (fruits) are unloaded on a conveyor belt for sorting and then washed.
Step 2	Fruits are then subjected to a type of mechanical compression appropriate to the fruit concerned. Although there are general fruit presses that can be used for more than one fruit type, citrus and stone fruits*, etc. are usually processed in specially designed equipment. Some fruit types require mechanical milling coupled with a biochemical process involving enzymes to obtain best juice yields.
Step 3	The juice undergoes a single- or multi-stage evaporation process to remove most of the water and other volatile material. The juice is cooked and fed into a centrifugal separator to separate pulp and cellular debris. After concentration, juices can be stored until they are reconstituted.
Step 4**	For consistency, the juice is then reconstituted and blended in steam-jacketed mixers: water, and sometimes multiple concentrate sources, are homogenized and sweetened as desired.
Step 5	The juice is heated to 85°C-95°C for 15-60 seconds to pasteurize, then instantly cooled with water. This stage is called the Ultra Heat Treatment (UHT) stage and is applied only to long-life juices.
Step 6	Juice is then packed in bottles (PET/Glass), tin cans or tetra pack and warehoused until distribution

*Stone fruits, which include mango, lychee, peaches, plums and nectarines, get their name because they have a stone like seed at their center.

** For local manufacturers that use fruit concentrates, the process begins at step four.



Figure 2: Fruit Juice Making Process (Illustrative)

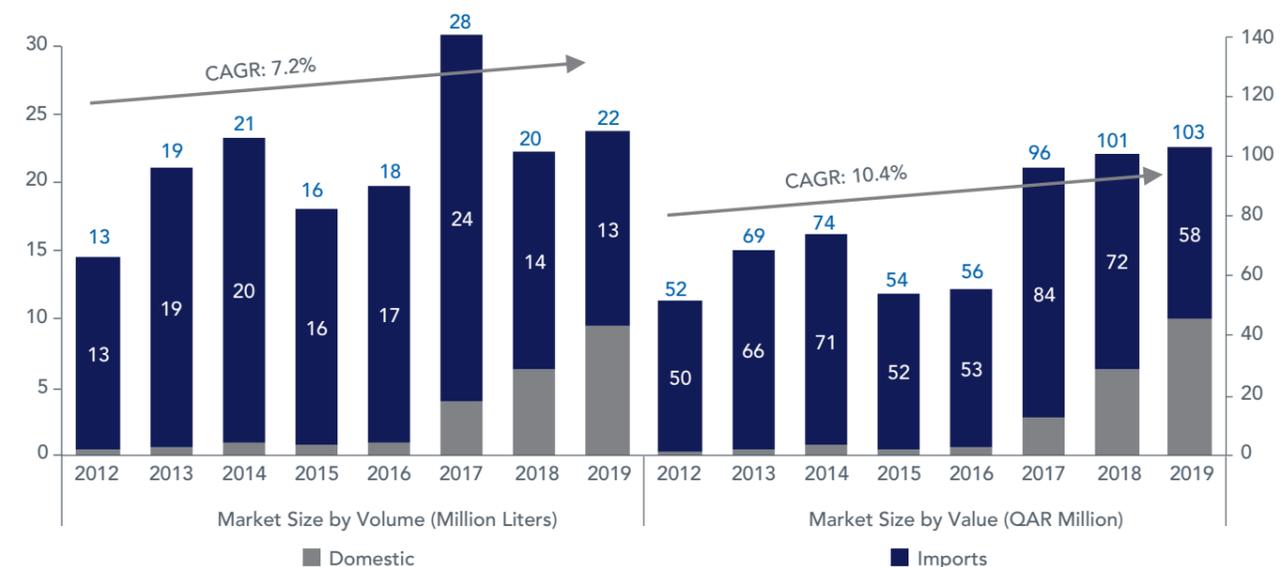


Qatar Market Overview

2.1.1 Historical Demand and Current Market Size

The juices market in Qatar was estimated at 21.7 million liters in terms of volume and was valued at QAR 103.3 million in 2019. Between 2012 and 2019, the juices market volume increased from 13.3 million liters to 21.7 million liters, growing at a CAGR of 7.2%, while in terms of value, it increased from QAR 52 million in 2012 to QAR 103.3 million in 2019, at a CAGR of 10.4%. Juice exports as of 2019 are negligible and account for less than 0.2% in terms of volume and 0.1% in terms of value of the domestic production. The total juices market in terms of volume was calculated based on installed capacity and production data from Ministry of Commerce and Industry (MOCI) Qatar Industrial Portal, inputs from industry players regarding capacity utilization and market share volumes, and import statistics of juices and juice concentrates into Qatar from Planning and Statistics Authority (PSA). Capacity details of domestic players are available in liters while import statistics for juices are provided in metric tons. Based on inputs from industry experts, a weight to volume conversion factor of 1 Ton of juice = 962 Liters was used to convert import volume to liters.

Chart 1: Qatar's Juices Market Size (Volume and Value), 2012 – 2019



Source: Team analysis based on MOCI Data, PSA Data and primary interviews



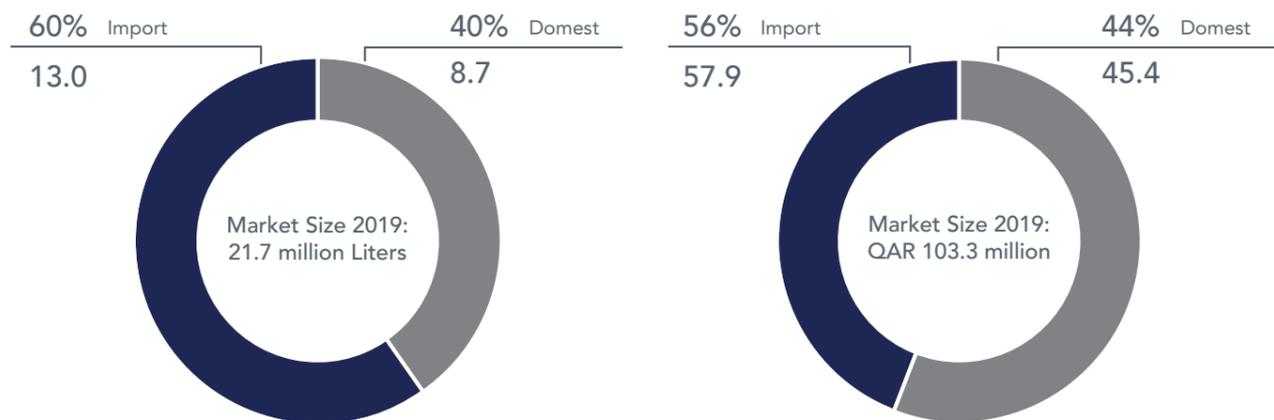
The market demand registered a sudden spike during 2017 due to the blockade imposed on Qatar which led to two main events in terms of demand and supply, 1) the blockade resulted in panic buying amongst people to maintain a reserve stock. This also led juice importers/distributors to purchase huge stock quantities of juices from Oman, Kuwait, Turkey, Iran, India, Netherlands and Brazil in advance to serve as a security stockpile during the blockade and 2) domestic manufacturers seized this opportunity in order to set up new facilities as well as scale up the capacity of their own manufacturing facilities which were designed to produce various juices from juice concentrates. Domestic production has been observed to successfully rise from the 2017 periods giving a boost to local manufacturers.

2.1.2 Overview of Market Segments

The juices market in Qatar can be categorized into two key segments: juices produced by domestic manufacturers and imported juices. In 2019, the domestic manufacturers had a market share of 40% (8.7 million liters) in terms of volume and 44% (QAR 45.4 million) in terms of value, while the imported juices segment had a share of 60% (13 million liters) in terms of volume and 56% (QAR 57.9 million) in terms of value.

Market share volume for domestic manufacturers was calculated based on installed capacity and production data from Ministry of Commerce and Industry (MOCI) Qatar Industrial Portal, inputs from industry players regarding capacity utilization and market share volumes. Market share value was calculated based on average price per liter of juice manufactured by each domestic player multiplied by estimated production volume. (Refer to details in Section 1.1.4. Domestic Juices Section, Table 10).

Chart 2: Juices Market Size Split by Providers (Volume and Value), 2019

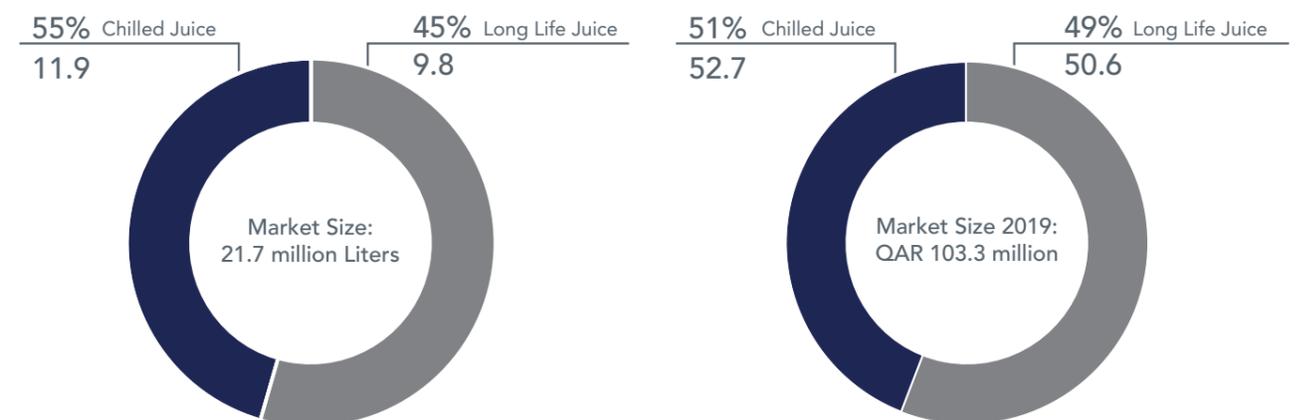


Source: Team analysis based on MOCI Data, PSA Data and primary interviews

In terms of volume, almost 55% of the market is dominated by chilled fruit juices while the remaining 45% is from long-life fruit juices. In terms of value, the share of chilled juices accounted for 51% of the market while long-life juices accounted for 49% by value. Due to quick consumption and short lifespan characteristics, chilled juices are commonly packaged in multiple sized units such as 180 ml, 200 ml, 250 ml, 450 ml and 1.5-liter PET bottles. The smaller sized bottles makes it easy for consumers to have an on-the-go option for consuming juice in a short span of time, especially while commuting or during meals. A large majority of domestic manufacturers compete in the chilled juice segment but have

slowly begun scaling up their long-life juice production in order to widen their product portfolio. Long-life fruit juice is priced slightly higher than chilled juices at about 15% to 20% higher per liter due to the involvement of UHT process and Tetra pack packaging which enables the juice to be stored for long periods. The most common varieties of long-life juices sold in the market is in the form of 200 ml and 1-liter Tetra packs. Chilled juices on the other hand have a short shelf life of up to 30 days while long-life juices have a shelf life ranging from 9 to 12 months.

Chart 3: Qatar's Juices Market by Type (Volume and Value), 2019



Source: Team analysis based on primary interviews and market data on juice pricing



[Juices]

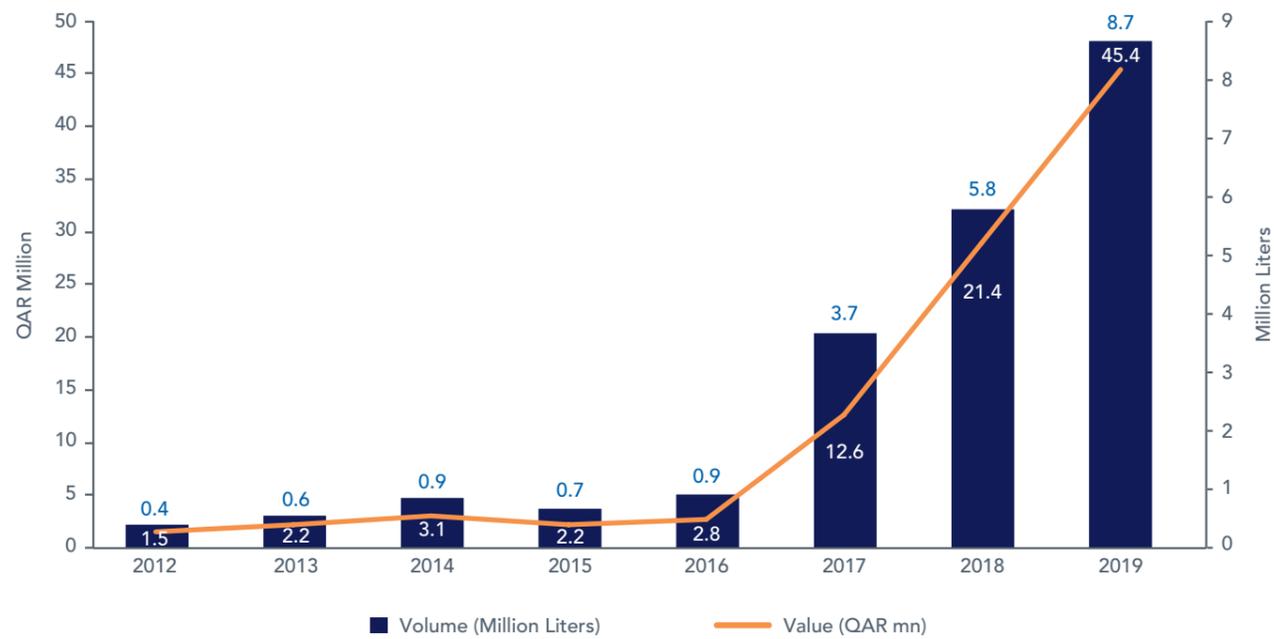


2.1.3 Domestic supply of juices

In terms of volume, the domestic supply of juices increased from 0.4 million liters in 2012 to around 8.7 million liters in 2019, growing at a CAGR of 63%, while

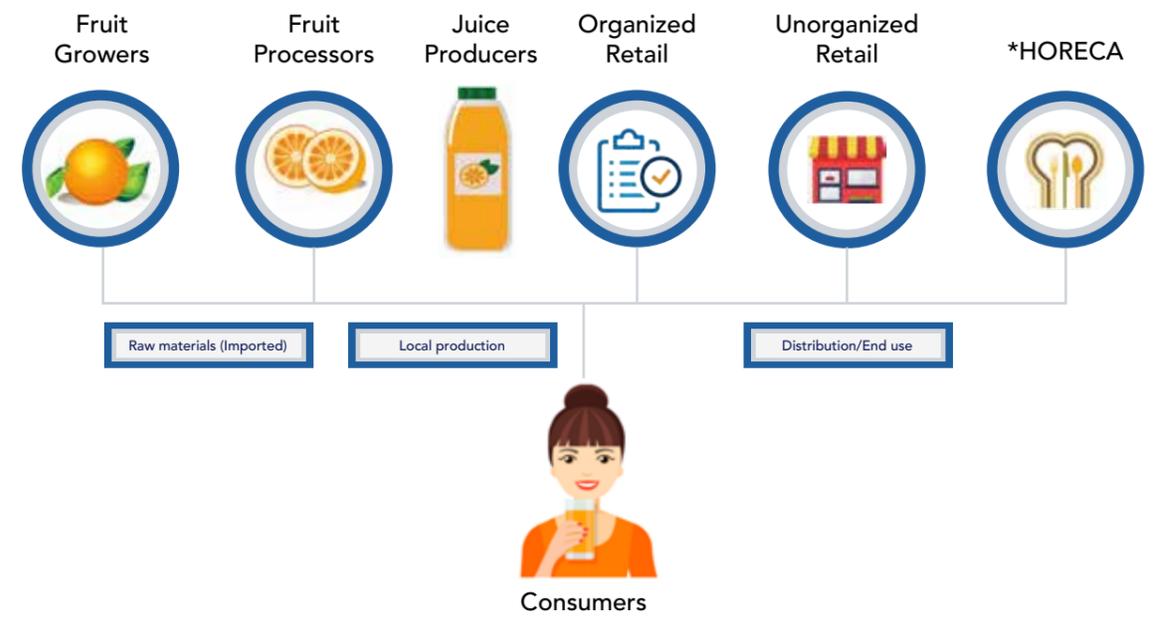
in terms of value, it increased from QAR 1.5 million in 2012 to QAR 45.4 million in 2019 at a CAGR of 56%.

Chart 4. Domestic Juices Market (Volume and Value), 2012 - 2019



Source: Team analysis based on PSA Data and primary interviews

Figure 3: Fruit Juice Value Chain in Qatar



Source: Team analysis based on primary interviews
*HORECA – Hotels, restaurants and cafes





2.1.4 Overview of Domestic Juice Manufacturers in Qatar

Although it appears that domestic manufacturers have extremely high installed capacity as per MOCI data, interviews with industry players suggest that these installed capacities refer to the plant's capability of using the same production lines for juice as well as milk (fresh and long life) depending on the choice of product to be manufactured by the company and the corresponding market demand for both products. The pasteurizing and filling process for juice and milk are the two common stages in the production line that enables local manufacturers to operate multifunctional production facilities. Since almost all local juice

manufacturers also have milk and milk products as part of their portfolio, it is difficult to determine specific capacity utilization only for juices due to the multifunctional nature of their plants. However, based on inputs received from primary interviews, the estimated juice production capacity, juice production volume, average price per liter and estimated capacity utilization have been calculated to determine the market size and market share. Currently almost all manufacturers operate their factories on a single shift basis and can run up to 3 shifts a day depending on market demand.

Table 10: Domestic Juice Manufacturers Estimate

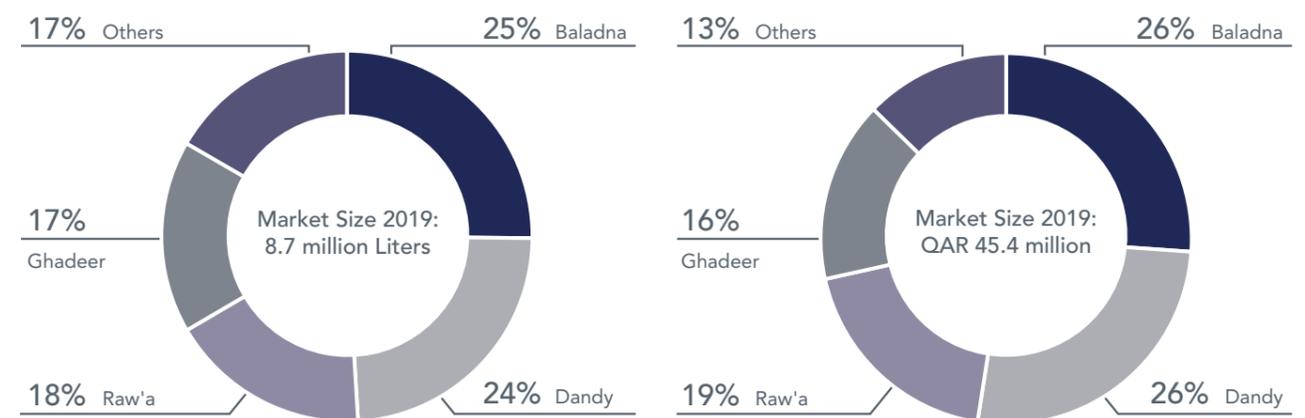
Company	Total Capacity	Market Share (Volume)	Market Share (Value)
Unit	million Liters	%	%
Source	MOCI	Estimates	Estimates
Baladna	47.6	25.2%	26.1%
Dandy	3.3	23.9%	26.4%
Raw'a	25.5	17.5%	19.0%
Ghadeer	36.6	16.8%	15.8%
Others	3.4	16.6%	12.7%
Total	116.5	100%	100%

Source: Team analysis based on MOCI Data and primary interviews

The top four players account for approximately 85% share of the domestic market in terms of value and volume. Baladna is the market leader with 25.2% market share, closely followed by Dandy with 23.9% market share in terms of volume. In terms of value, Baladna and Dandy have almost similar market share of 26% with negligible difference of 0.3% between Dandy and Baladna due to slightly higher pricing of Dandy. Other players

in the market include Al Wajba Dairy & Juice Factory, Themar Factory, Al Manal Food Factory and Colosseum Doha that produce juices and supply to various hotel chains, restaurants, catering companies and supermarkets such as Al Meera, LuLu, Carrefour and Monoprix.

Chart 5: Market Share of Domestic Players



Source: Team analysis based on MOCI Data and primary interviews



Baladna Food Industries: Baladna Food Industries established in 2014, is Qatar's largest producer of fresh dairy, has also set up a factory for producing juices and has started selling in the market. Baladna produces chilled juice produced from juice concentrate or pulp with little to no additives. Chilled juices are produced in 180 ml and 1.5-liter PET bottles. Baladna recently launched a new product line of long-life fruit juices which goes through a process called UHT (ultra-heat treatment) which sterilizes the juice at very high temperatures. Long-life juices are produced in 200 ml and 1-liter Tetra packs. Flavors include orange, apple, pineapple, pomegranate, fruit mix, and tropical mix fruits.



Dandy: Gulf Danish Dairy & Williams established this company in year 1973, in 1998 it was renamed as Dandy. In 2017, they relaunched all products with complementary look and modern packaging formats. Dandy is an ISO 9001:2000 certified company and one of the most well-respected brands in Qatar. Dandy's portfolio includes dairy products such as yoghurt, Laban, cheese, cream, fruit juices (Short-life juice from concentrate or pulp) and ice cream. Chilled juices are produced in 200 ml, 300 ml, 1-liter and 1.5-liter PET bottles while long-life juices are produced in 200 ml and 1-liter Tetra packs. Single fruit flavors include orange, apple, mango, pomegranate, guava and blended flavors such as mixed fruit, mixed berry, lemon and mint, kiwi and lime orange and carrot.



Raw'a: Gulf Food Production, established in 2015, is the owner of the Raw'a brand, and specializes in food production, including a variety of dairy products and beverages, luxury pastry, chocolate, and Italian gelato. Raw'a mainly produces chilled juices from juice concentrates and pulp packaged in 200 ml and 1-liter PET bottles and long-life juices are produced in 200 ml and 1-liter Tetra packs.



Ghadeer: Arab Qatari Co. For Dairy Production "Ghadeer" started in 1986 in Qatar. The company offers dairy products including milk, Laban and yoghurt and fruit juices. Ghadeer recently imported one juice filling machine in late 2018 with a capacity of 13,000 liters per hour. Their chilled juices are produced from juice concentrates and pulp in 200 ml, 1-liter and 1.75-liter PET bottles. They currently do not produce long-life juices.

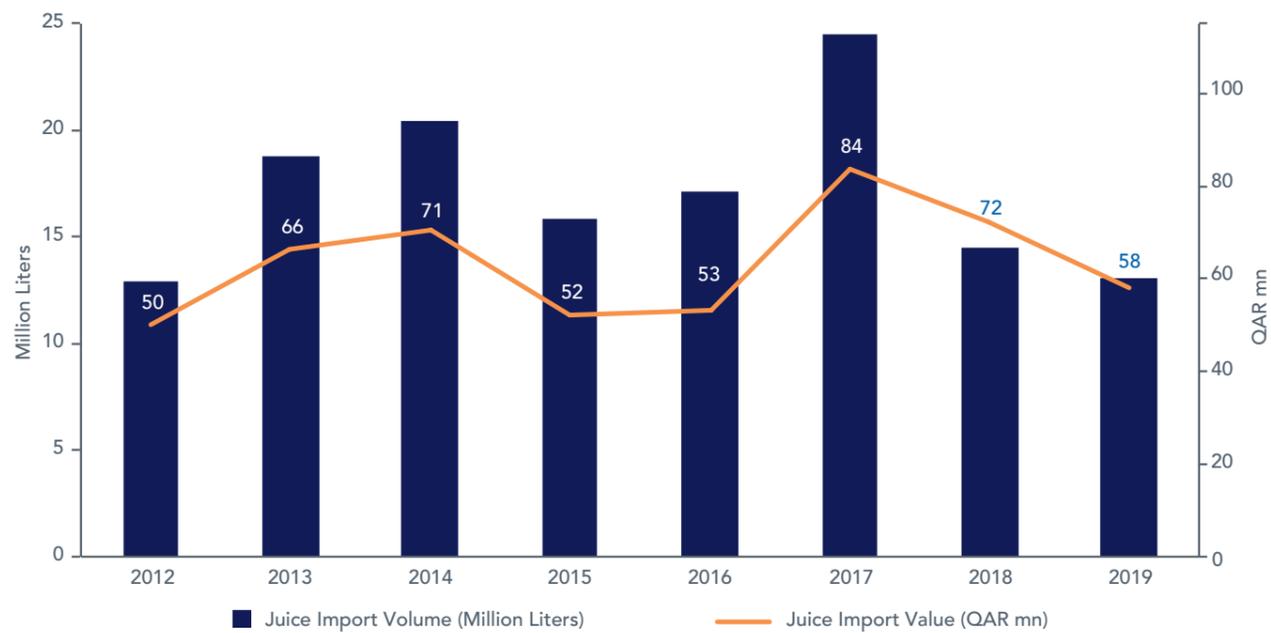


2.1.5 Imported Juices

The imported juices market increased from 12.9 million liters in 2012 to 13 million liters in 2019 in terms of volume, while in terms of value, it increased from QAR 50 million in 2012 to QAR 58 million in 2019 at a CAGR of 2%. The gradual decrease in imports is on account of import substitution by domestically produced juices. Share of domestic players have significantly increased

from 5% in 2016 during pre-blockade conditions to 15% in 2017 during the blockade and further increased to 40% volume share in 2019. Domestic players have installed adequate production capacities to address current demand as well as future anticipated growth in demand which could lead to a further increase in the share of domestic production and decline of imports.

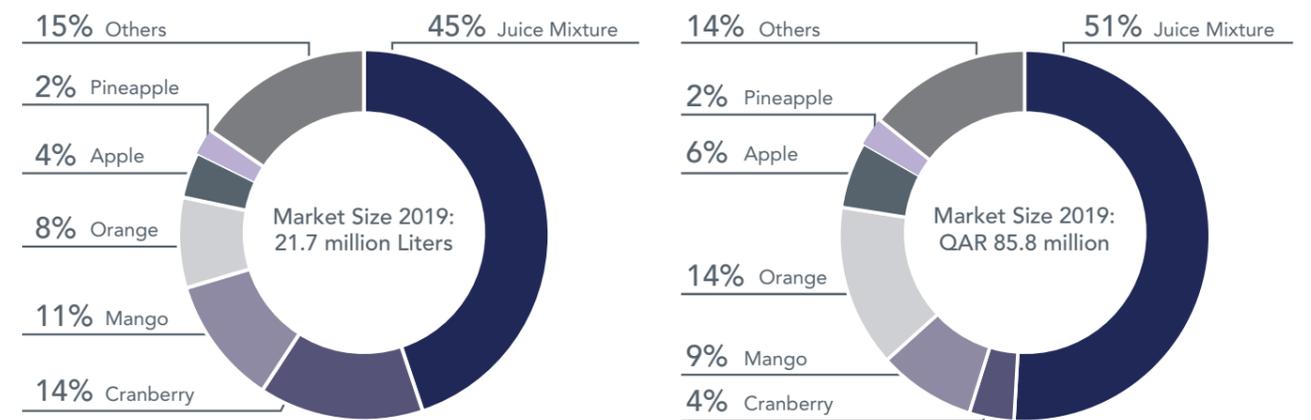
Chart 6: Imported Juices Market (Volume and Value), 2009 - 2019



Source: Team Analysis based on PSA Data

In terms of market value, the most common imported juice flavors include mixed fruit juice, orange, mango, cranberry and apple.

Chart 7: Qatar's Imported Juices Market by Flavors (Volume and Value), 2019



Source: Team analysis based on PSA Data



Table 11: Juice Importers in Qatar

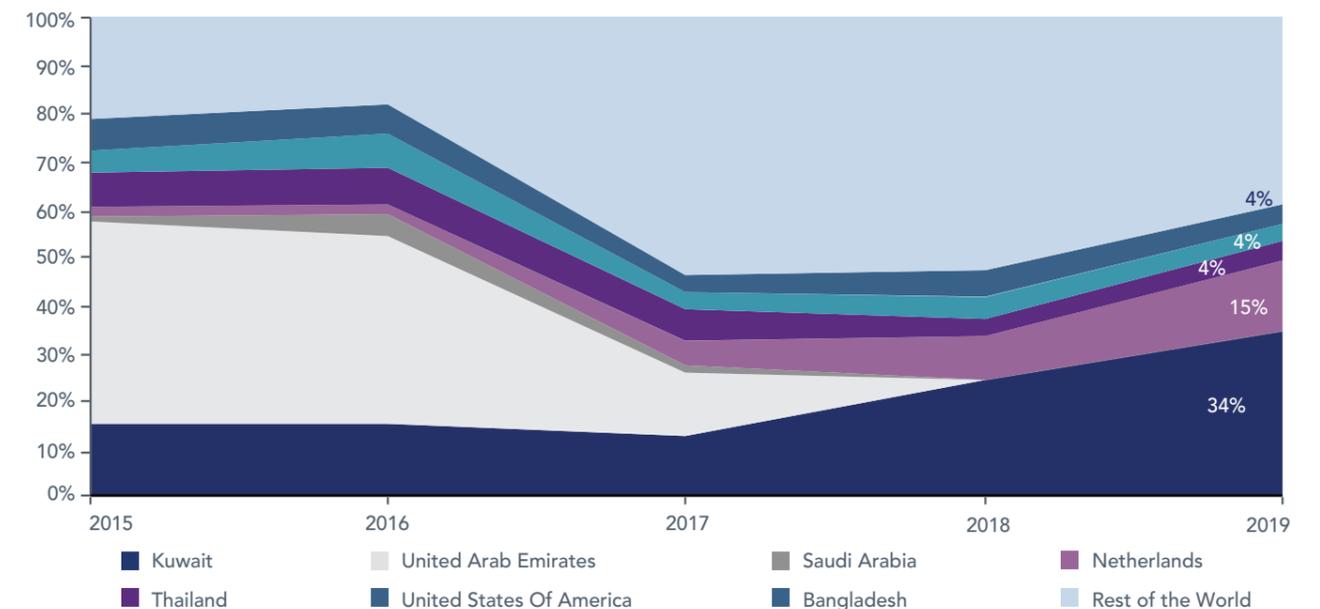
Juice Importers in Qatar			
Name	Products	Target segments	Brand (s)
<p>Transind Holding is one of the largest FMCG companies in Qatar and has wide range of products. The company's FMCG & Distribution division represents KDD-Kuwait for dairy products, juices and ice creams in Qatar.</p>	<ul style="list-style-type: none"> Long-life Nectar (Orange, Mango, Guava, Passion fruit, Peach, Pomegranate, Apricot) Long-life Juices (Apple, Orange, Pineapple, Grape, Tomato, Cocktail, Cherry, Lemonade, Cranberry) 	<ul style="list-style-type: none"> Organized retailers HORECA 	KDD (Kuwait)
<p>Ali Bin Ali was founded in 1945, Ali Bin Ali Group is one of the largest distribution companies in Qatar. The company is the distributor of Tropicana juices (Pepsi) in Qatar.</p>	<ul style="list-style-type: none"> Chilled and long-life Juices (Orange, Pineapple, Strawberry, Pomegranate, Mango) 	<ul style="list-style-type: none"> Organized retailers HORECA 	Tropicana (Kuwait)
<p>Arabian Supplies is a subsidiary of Tadmur Holding Group and an importer and distributor of FMCG brands in Qatar. The company imports and distributes 'Tamek' juices from Turkey.</p>	<ul style="list-style-type: none"> Chilled and Long-life (Orange, Pineapple, Cherry, Pomegranate, Peach, Mango, Apricot) Still drinks (Pear, Grape, Berry Blend) Tomato juice 	<ul style="list-style-type: none"> Organized retailers HORECA 	Tamek (Turkey)
<p>Qatar National Import & Export Co (QNIE) was established in 1964 and now part of Al Wataniya International Holdings, is a leading FMCG distributors in Qatar. The company imports and distributes Uludag juices from Turkey.</p>	<ul style="list-style-type: none"> Long-life juices (Orange, Green Apple, Lemon, Strawberry, Peach, Kiwi, Pear) 	<ul style="list-style-type: none"> Organized retailers HORECA 	Uludag (Turkey)
<p>Friendly Food Qatar was established in 1974, It imports and distributes a wide variety of food products in Qatar. The company is an importer and distributor of Maccaw brand from LibanJus, Lebanon.</p>	<ul style="list-style-type: none"> Long-life 100% juices (Orange, Pineapple, Grapefruit, Exotic fruits, Guava, Mango, Cranberry) 	<ul style="list-style-type: none"> Organized retailers HORECA 	Maccaw (Lebanon)

<p>Charlotte Trading & Contracting was established in 1998 and is involved in distribution of imported food & beverage products in Qatar. The company imports juices from several countries including Poland (around 60%, Oshee brand), India (20%, Organa brand), Malaysia (10%) and Thailand (10%). It has four warehouses with cold storage facilities.</p>	<ul style="list-style-type: none"> Long-life fruit drinks (Lemon, Multifruit, Lemon and Grapefruit, Lemon and Pomegranate, Lemon and Black Currant) Chilled Juices (Apple, Mango, Mixed fruit, Guava) 	<ul style="list-style-type: none"> Organized retailers 	Oshee (Poland), Organa (India)
<p>Harvest International Trading a part of NAAAS Group which markets and distributes foodstuffs and beverages in Qatar. The company imports juices from Oman and Turkey</p>	<ul style="list-style-type: none"> Chilled and Long-life Juices (Carrot-Cucumber-Rhubarb, Courgette-Apple-Leeks, Cucumber-Raspberry-Tarragon, Cucumber-Apple-Broccoli, Cauliflower-Apple-Celeriac, Tomato-Pepper-Pink Onion) 	<ul style="list-style-type: none"> Organized retailers HORECA 	A'Safwah (Oman)

2.2 Sources of Imports

Prior to the blockade, GCC countries including UAE, Saudi Arabia, Kuwait and Bangladesh were the key sources for Qatar's juice imports.

Chart 8: Key Sources of Juice Imports, 2015 - 2019



Source: Team analysis based on PSA Data



While UAE's share was the highest in 2015 at 43%, its share declined to zero after the blockade. However, after the blockade, the imports from UAE and Saudi Arabia were substituted by imports from Kuwait, Netherlands, Oman, Lebanon and Turkey and Iran thus becoming major exporters of juices to Qatar.

After the blockade, Kuwait's share increased from 15% in 2015 to 34% in 2019, while the share of Netherlands increased from 2% in 2015 to 15% in 2019. The share of imports from Thailand had remained stable at 6-7% but declined to 4% in 2019. With Qatar developing more sourcing options post the blockade, the share of other countries has increased from 21% in 2015 to 39% in 2019. Juice imports from countries like Turkey, Iran, Jordan, Lebanon and India have been on the rise.

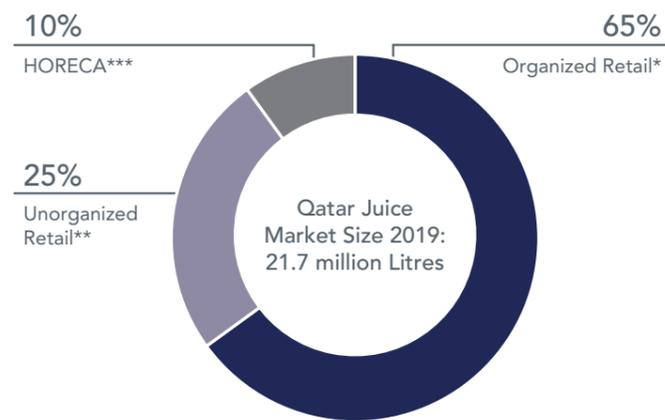
Qatar has developed new shipping routes through Oman, in addition to opening new routes from its recently opened Hamad Port which has enabled Qatar to diversify its supply chain for food, including juices. It has also ensured continuous supply of products to meet the rising demand of the local market. This has resulted in the availability of variety of juice brands in the country.

2.3 Key Buyers in the Market

Key buyers of juices include a range of establishments, such as organized retailers (hypermarkets, supermarkets, and convenience stores), small unorganized retailers and hotels, restaurants and cafes (HORECA).



Chart 9: Key Buyers of Juices



Source: Team analysis based on primary interviews

* Organized Retail includes Hypermarkets, Supermarkets, Convenience Stores

** Unorganized Retail includes small shops known as Baqalas

*** HORECA (Hotels, Restaurants, Cafes)

2.4 Pricing analysis

Imported juices are priced at a premium with respect to the locally manufactured juice products. As the product increases in size, the premium increases at a growing

rate. For the small juices, the premium is of 30%, for the medium juices, the premium is of 38% and for the large juices, the premium is of 61%.

Table 12: Average Retail Pricing of Domestic and Imported Juices

Juice Size	Juice Type	Domestic (QAR)	Imported (QAR)	Price Difference
Small (up to 500ml)	Chilled	1.3	1.6	30%
	Long-life	1.5	1.9	30%
Medium (500ml to 900ml)	Chilled	5.5	7.6	38%
	Long-life	6.5	8.9	38%
Large (1 to 1.5 liter)	Chilled	8.5	13.6	61%
	Long-life	10.0	16.0	61%

Source: Market data from supermarkets and online retail stores

The range of costs for various components of domestic juices is shown in the table below. Expenses on raw materials account for about 40-50% of the total price of locally produced juices. Profit margin can range between 15% and 20%, depending on order volumes, discounts and customer-manufacturer relationship.

Organized retailers form the majority share of end user segments and their mark-up ranges between 40% and 50%. Mark-ups for importer/distributors range from 20-30% and majority of their supply goes to the organized retail and the HORECA segment.

Table 13: Cost Analysis of Domestic and Imported Juices

Domestic Juices Cost Analysis		Imported Juices Retail Pricing	
Component	Range	Segment	Range
Raw Materials	40-50%	Importer/Distributor Mark-up	20-30%
Salaries	10-15%	Retailer Mark-up	40-50%
Rent	10-15%		
Marketing & Distribution	15-20%		

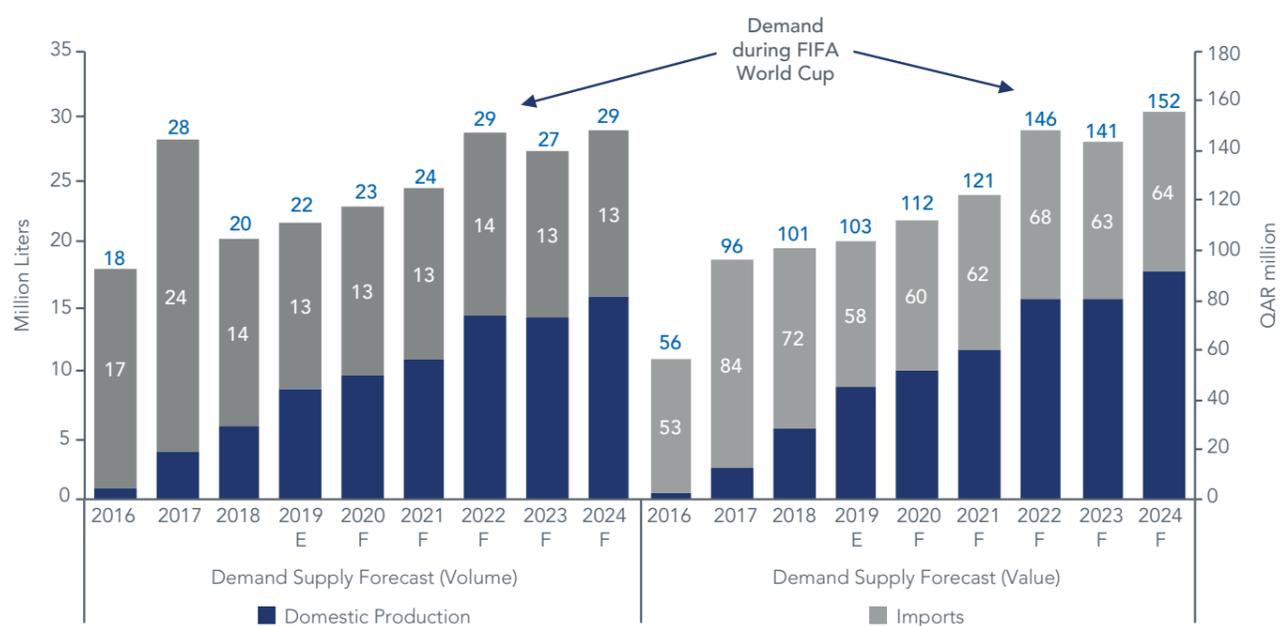
Source: Team analysis based on primary interviews



2.5 Juices Demand Supply Forecast

The demand for juices is estimated to grow from 21.7 million liters in 2019 to 28.8 million liters in 2024 at a CAGR of 5.8%, while in terms of value it is forecast to grow at a CAGR of 8% from QAR 103 million in 2019 to QAR 152 million in 2024.

Chart 10: Qatar's Juices Demand Supply Forecast, 2019 - 2024



Source: Team analysis based on MOCI Data, PSA Data and primary interviews

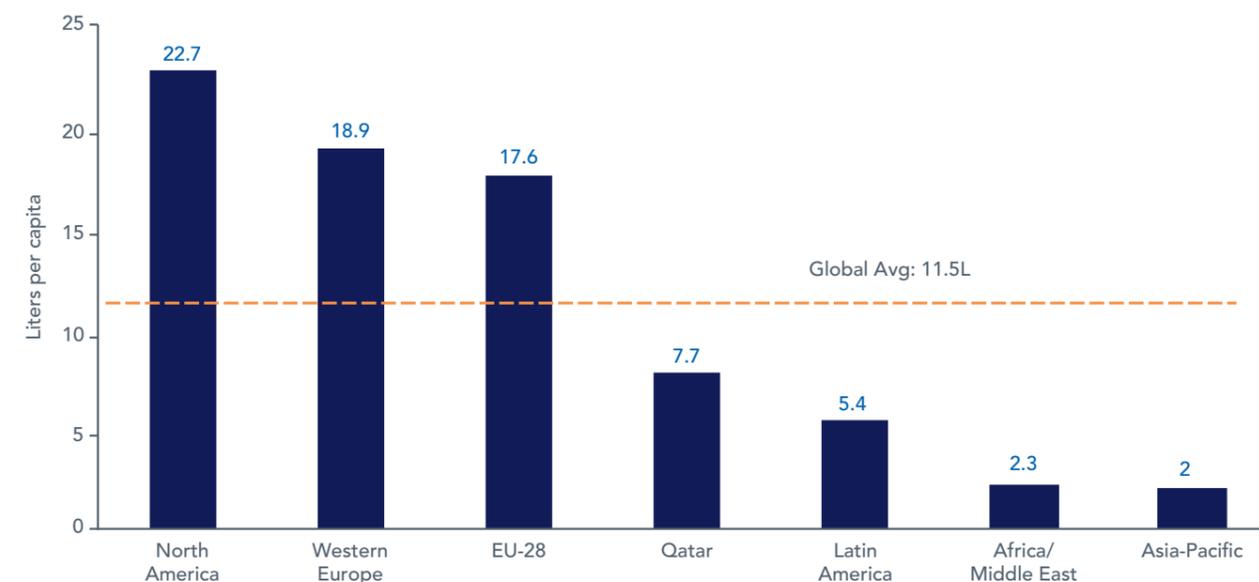
Demand Forecast

The overall demand for juice consumption in terms of volume is estimated to grow in line with Qatar's population growth as well as per capita consumption growth. Based on World Bank estimates, Qatar's population is estimated to grow at the rate of 1.7% annually until 2024. Qatar's per capita juice consumption currently stands at 7.7 liters (based on current market size estimates) while the global average per capita juice consumption stands at 11.5 liters. Per capita consumption of juices in Qatar in terms of volume has grown historically at a CAGR of 3.5% between 2015 and 2019. Based on the current growth trajectory, it would take approximately 11 years for Qatar's per capita consumption to reach the global average. For future growth estimates, per capita juice consumption

in terms of volume is estimated to grow at 4.1% per annum, assuming that Qatar's per capita consumption will equate that of the global average in the next 10 years. Thus, the overall juice market in Qatar in terms of volume is estimated to grow at 5.8% per annum between 2019 and 2024.

The hosting of the FIFA 2022 World Cup is expected to provide a one-time boost for the juice industry. It is estimated that approximately 3.1 million tourists are expected to visit Qatar during 2022 for the event which will last for a period of almost 1 month. The global average juice consumption of 11.5 liters/annum (0.96 liters/month) is considered as a benchmark. Thus, during the FIFA World Cup, an estimated 2.97 million liters of additional juices will be consumed in 2022.

Chart 11: Global per capita Juice consumption comparison



Source: (AIJN) European Fruit Juice Association 2019 Report

* Based on current market size estimates

Supply Forecast

Domestic manufacturers have successfully managed to capture the local market since the blockade, this is evident from the fact that their market share has increased from 15% in 2017 to 40% share in 2019. There is a strong indication of import substitution as local manufacturers have been able to provide a wide variety of juice flavors in the chilled as well as long-life juice segment at competitive price points which are lower than imported products. Apart from capturing the market in terms of product offerings and competitive prices, local manufacturers have substantial installed capacity to capture the future growth in demand. Going forward, it is estimated that the share of domestic manufacturers will gradually increase as compared to imports and will achieve 50% share by 2022, further increasing to 55% market share by 2024.

Chilled juices account for 60% while long-life juices account for 40% share of the overall juice market. Currently only three local manufacturers (Dandy, Baladna and Raw'a) provide long-

life juices. Local long-life juices are priced about 30% lower than imports. Going forward, local manufacturers are expected to increase their product offerings as well as scale up their production of long-life juices to compete with imports. The share of long-life juices is estimated to increase slightly and range between 45% and 50% of the market in 2024.

Average price of domestic and imported juices have increased on an average between 2% to 4% between 2014 and 2019, while overall inflation in Qatar has ranged between 1% and 3.5% during the same period. According to World Bank estimates, inflation for Qatar is estimated to range between 1.9% to 2.2% until 2024. For future growth estimates, the average price of domestic and imported juices has been estimated to grow at an average rate of 2% per annum in line with historical price increase trends for juices as well as World Bank inflation estimates for Qatar. Thus, the overall juice market in Qatar in terms of value is estimated to grow at 8% per annum between 2019 and 2024.



2.6 Demand Supply Gap Analysis

Installed capacity increased from an estimated 62 million liters in 2017 to 117 million liters in 2019. However, as per MOCI data, existing installed capacities of domestic manufacturers appear high due to the multifunctional nature of their facilities to process juices and well as milk in the same factories. Domestic installed capacity was in excess of 95 million liters in 2019 as compared to the demand and is estimated to reduce to an excess of 88 million liters by 2024 since domestic manufacturers will be in a position to capture higher market share since they have a wide range of product offerings, competitive price points in comparison to imported juices and adequate capacity to address future growth in demand. As mentioned in the previous section, domestic manufacturers have increased their market share from 15% in 2017 to 40% share in 2019 and are expected to increase it further to 55% share by 2024.

Given the current excess installed capacity, domestic players are well positioned to compete with imported juices in terms of product offerings and competitive price points, it presents a challenging proposition for new players to enter the market.

2.7 Regulatory Analysis

General regulations related to manufacturing of juices is covered in Section 6: Regulations Concerning food production in Qatar.

General Regulations on Imports of Juices

Direct marketing for international goods from foreign companies is allowed through local offices in Qatar. Juices can be directly marketed in Qatar through local representative offices. Imports generally require a license. A company that wishes to import goods into Qatar must be legally registered with the Ministry of Commerce and Industry (MOCI). Additionally, all importers and exporters are expected to be listed in the register of the MOCI. Further, the importers must put forward a request to the Ministry of Municipality and Environment for an inspection of the premises to which they would have the goods imported to.

GCC Unified Customs Regulations

Under QS 9/1996, food labels must contain the following information on the original label or primary packaging:

- Product and brand names
- Ingredients in their descending order of proportion
- Additives
- Net contents in metric units (volume in case of liquids)
- Dates of production and expiry
- Manufacturer's name and address
- Country of origin
- Special storage, transportation and preparation instructions, if any

Original labels must be printed in Arabic. However, bilingual labels are permitted, provided Arabic is one of the languages (e.g., Arabic/English) and all the required information printed in the foreign language is also printed in Arabic.

Arabic language stickers are permitted in lieu of original Arabic or bilingual labels, provided the sticker is extremely difficult to remove, includes all required label information, does not cover required information on the original label and does not contradict the information on the original label. In fact, local officials consider such stickers to be labels.

According to the GCC Standardization Organization (GSO), the GSO standard no. 150/2013 specifies the mandatory expiration periods to be mentioned on all the imported goods and the expiration date that should be recorded based on the type of packaging.



[Processed Fruits & Vegetable Products in Qatar]

Table 14: Juices Expiration Periods

Mandatory Expiration Periods for Juices		
Product	Packaging Type	Expiration Date
Pasteurized fruit juices, drinks and nectars	Suitable containers	30 days
Juices treated with flash pasteurization	Suitable containers	7 days
Baby fruits juices	Glass containers tightly sealed and sterilized	12 months
Long life fruit juices, drinks and nectars	Lined carton containers (Tetra pack)	12 months

2.8 SWOT Analysis

Figure 4: SWOT Analysis of Fruit Juices in Qatar

Strengths	Weaknesses
<ul style="list-style-type: none"> • Growing demand for fruit juices. • Local production of fruit juices is on the rise. • Government support for national/ domestic products. • Well-developed storage and transportation infrastructure (air/ sea cargo handling, cold storages, warehouses) 	<ul style="list-style-type: none"> • The primary raw materials cannot be naturally cultivated locally due to unfavorable weather conditions. As a result, the domestic market is largely dependent on imports. • Domestic players typically have production but are characterized by low capacity utilization.
Opportunities	Threats
<ul style="list-style-type: none"> • Growing health consciousness among people. • Growing hospitality and tourism industries. • Excise tax imposed on carbonated drinks (50% rate) and energy drinks (100%) potential to attract investments in fruit juice production sector. • A huge potential derived from the growing organized retail channels such as hypermarkets and supermarkets. 	<ul style="list-style-type: none"> • Domestic manufacturers of juices continue to face stiff competition from imports, earlier from Saudi Arabia & UAE and now from Kuwait, Turkey, Thailand, Oman and Lebanon. • Fluctuations in raw material prices could put pressure on margins and the local manufacturers may not be able to pass on the price increase to the consumer. • Growth of fresh fruit juice bar chains. • Large organized retail players may introduce their own label products by leveraging economies of scale in purchasing, access to large consumer base and lower pricing.

GCC Standardization Organization (GSO)

[Juices]



2.9 Michael Porter's Five Forces Model Analysis - Juices

Figure 5: Michael Porter's Five Forces Model (Juices)



2.10 Critical success factors

Table 15: Critical Success Factors for Fruit Juice Business

Critical Success Factors for Fruit Juices in Qatar	
Parameter	Description
Access to raw materials	Access to juice concentrates, PET bottles and Tetra Pak packaging materials is important for companies producing juices to thrive in the local market. Development of suppliers for raw materials (concentrates) for various flavors and from different regions with long term contracts is important for better pricing and ensuring continuity in supply. Developing backup sourcing strategies is also crucial and became clear after the blockade.
Marketing	With several players offering similar products, building strong brand awareness and association, differentiation through offering a wide variety of flavors, ensuring consistent good quality and trustworthy image should be of high priority to compete with imports. Attractive and modern branding/packaging of products play a key role in attracting new and existing customers. Domestic players must focus on tailoring their branding and advertising activities towards the local population which will enable them to have stronger connect with their customers.
Customer relationship	Retail chains and convenience stores are the major channels for juice companies. A consumer-oriented approach is vital for operation in the local market with a strategy focusing on buyer needs. This can be achieved by understanding customer requirements, establishing a robust distribution network and maintaining adequate stock levels to meet customer replenishment cycles.
Competitive awareness	Competitive awareness gives the manufacturer an upper hand in terms of product pricing, positioning and product variants. The scope of product differentiation is limited in the juice segment, hence domestic players need to compete by pricing their products appropriately and introducing new flavors and product variants which are not common in the market in order to compete with other players as well as imports.
Capacity Utilization	Although existing manufacturers have high installed capacities, most of them have multifunctional production lines due to their presence in juices as well as dairy products, this enables them to diversify their product portfolio.

2.11 Future Outlook

- Demand for juices is estimated to increase to 28.8 million liters, valued at QAR 152 million in 2024.
- With changing lifestyles, consumers are increasingly opting for juices because of convenience, easy availability and anytime consumption. Consumers are also increasingly becoming aware of health and wellness benefits as compared to carbonated drinks.
- The introduction of the New Excise Tax Law in January 2019 imposed a 50% tax on carbonated drinks and 100% tax on energy drinks will also act as a deterrent towards the sale of these drinks and would prompt customers to switch to fruit juices.
- Large working and young population will also drive the demand for juices in Qatar. The growth in organized retail chains, F&B outlets as well as the growth in hotels will drive the demand for contribute growth in demand for juices in Qatar. Although initiatives are planned to increase self-sufficiency in fruit production, it would take time to materialize. Increasing local fruit production would also be limited to few fruits. As such, the domestic juice industry would continue to import juice concentrates as raw material for making juices.
- With several regional and foreign players well established in other neighboring markets, penetrating the export market would be a challenge. It would take time and necessitate investment in brand building and marketing in the export market.

3. JAMS & JELLIES



3.1 Sub-sector Overview

Fresh fruits form the key raw material in the production of jams that undergo a series of steps, such as washing, pulping, boiling, cooling and packing. The step-by-step process is as follows:

Table 16: Jams and Jellies Production Process

Step 1	Inspection: When the fruit arrives at the plant, it is inspected for quality, using color, ripeness, and taste as guides. Fruit that passes inspection is loaded into a funnel-shaped hopper that carries the fruit into pipes for cleaning and crushing.
Step 2	Cleaning, crushing, and chopping: As the fruit travels through the pipes, a gentle water spray clears away surface dirt. Depending on whether the finished product is to be jam or jelly, paddles push the fruit and or just its juice through small holes, leaving stems and any other excess debris behind. Some fruits, such as citrus and apples may be manually peeled, cored, sliced and diced. Cherries may be soaked and then pitted before being crushed.
Step 3	Pasteurizing: The fruit and/or juice continues through another set of pipes to cooking vats. Here, it is heated to just below the boiling point (212° F [100° C]) and then immediately chilled to just below freezing (32° F [0° C]). This process, pasteurization, prevents spoilage. The juice or fruit is transferred to large refrigerated tanks and then pumped to cooking kettles as needed.
Step 4	Cooking: Premeasured amounts of fruit and/or juice, sugar, and pectin are blended in industrial cooking kettles. The mixtures are usually cooked and cooled three times. If additional flavorings are to be included, they are added at this point. When the mixture reaches the predetermined thickness and sweetness, it is pumped to filling machines.
Step 5	Filling: Pre-sterilized jars move along a conveyer belt as spouts positioned above pour premeasured amounts of jam or jelly into them. Metal caps are then vacuum sealed on top. The process of filling the jars and vacuum packing them forces all air out of the jars further insuring the sterility of the product.
Step 6	Labeling and packaging: The sealed jars are conveyed to a machine that affix preprinted labels. The jars are then packed into cartons for shipment. Depending on the size of the producer's operation, labeling and packaging is either achieved mechanically or manually.

Figure 6: Jams & Jellies Making Process (Illustrative)



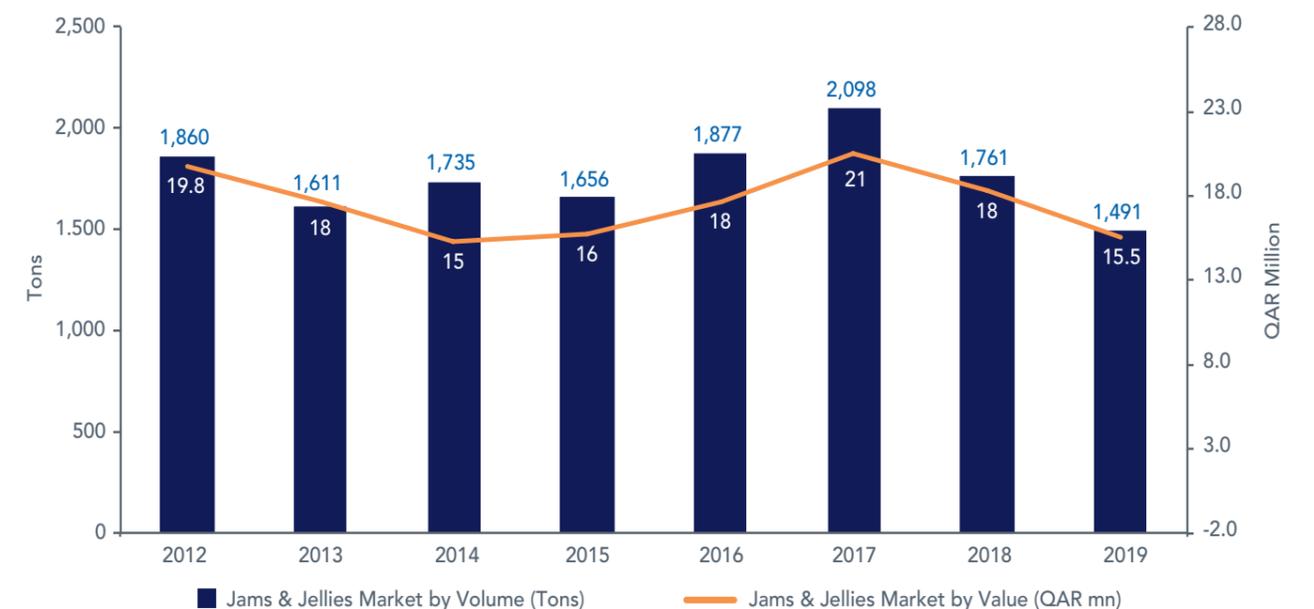
3.2 Qatar Market Overview

Fresh fruits form the key raw material in the production of jams that undergo a series of steps, such as washing, pulping, boiling, cooling and packing. The step-by-step process is as follows:

3.2.1 Historical Demand & Current Market Size

There are currently no domestic producers of Jams & Jellies in Qatar. The overall market size is represented entirely by imports which amounted to 1,491 tons in 2019. Between 2012 and 2019, the jams & jellies market declined from 1,860 tons in 2012 to 1,491 tons in 2018, registering a decline of 3.1%, while in terms of value, it decreased from QAR 19.8 million in 2012 to QAR 15.5 million in 2019, registering a decline of 3.4%.

Chart 13: Qatar's Jams & Jellies Market Size (Volume and Value), 2012 - 2019



Source: Team analysis based on PSA Data

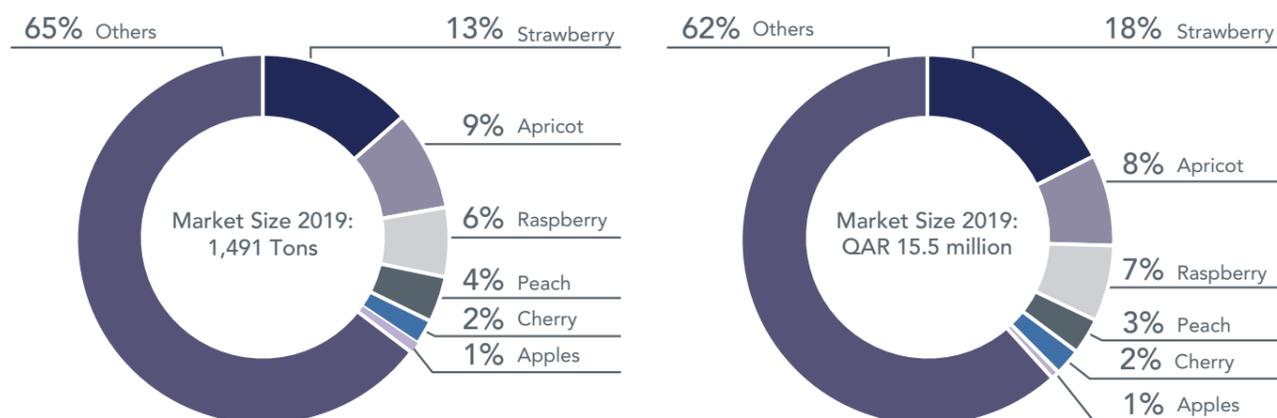


All the products under the jams & jellies category are predominantly imported from Turkey, India, France and Lebanon. The relatively small size of Qatar's market has resulted in lack of domestic manufacturing facilities in the country. To remain viable, local manufacturing companies would need to export their products, especially in the regional markets. However, intense competition from well-established players from the GCC/Middle East region as well as from

countries like Turkey and India and lack of locally produced raw materials would make it difficult for local manufacturers to thrive.

In terms of type of fruit, strawberry flavored jams & jellies have the largest share of the overall market with 13% share in terms of volume and 18% share in terms of value, followed by Apricot flavored jams with 9% volume and 7% value share of the market.

Chart 14: Qatar's Jams & Jellies Market by Type of Fruit (Volume and Value), 2019



* Others include mixed fruit, mango, watermelon, pineapple etc.
Source: Team analysis based on PSA Data



3.2.2 Key Suppliers in the Market

Table 17: Jams & Jellies Importers in Qatar

Jams and Jellies Importers in Qatar			
Name	Products	Target segments	Brands
Al Mutasaliq Trading Center	• Jams (Strawberry, Raspberry, Blackberry, Fig, Apricot, Orange)	• Organized retailers • HORECA	Seyidoglu (Turkey). Al Mutasali
Arizona Trading Co.	• Jams (Apricot, Peach, Orange, Blueberry, Strawberry, Raspberry, Cherry, Fig)	• Organized retailers • HORECA	St. Dalfour (France)
Ideal Marketing & Services	• Jellies (Strawberry, Banana, Orange, Pineapple, Cherry)	• Organized retailers • HORECA	Aruba (Lebanon)
Friendly Food Qatar	• Jams (Apricot, Blackberry, Fig)	• Organized retailers • HORECA	Gardenia Grain D'Or (Lebanon)
Abdul Hussain Mohd Khoory Store	• Jellies (Strawberry, Raspberry, Orange, Pineapple, Cherry, Lime, Lemon, Peach, Apricot)	• Organized retailers • HORECA	Tiara (Malta)

Source: Company websites

3.2.3 Overview of Jams & Jellies Importers in Qatar

Al Mutasaliq Trading Center: Established in 1994, Al Mutasaliq Trading Center specializes in importing Saffron and dates. It is also a leading player in distributing and importing coffee, tea and natural refined honey. The company has now become an exclusive distributor of jams from Seyidoglu, Turkey. It also has its private label brand for jams (Al Mutasaliq) but is not involved in manufacturing as it is done by a third party outside Qatar.

Arizona Trading Company: Arizona Trading Company was established in 1999 and later acquired by Sadita Holdings, Kuwait in 2006. The company is involved in distributing FMCG products through importing international brand food supplies. Arizona Trading Company imports jams (spreads and preserves) from St. Dalfour, France. St Dalfour products are made from natural ingredients, no artificial preservatives, processed sugar or colors are used.

Ideal Marketing & Services: Ideal Marketing & Services is a partnership company established in 2004, dealing in imported food products. The company imports the 'Aruba' brand jellies from HINTRAG (Hachem Industry and Trading Group), Lebanon.

Friendly Food Qatar: Established in 1974, Friendly Food Qatar imports and distributes a wide variety of food products in Qatar. The company is an importer and distributor of jams (Gardenia Grain D'Or brand) from Modern Food Industry, Lebanon.

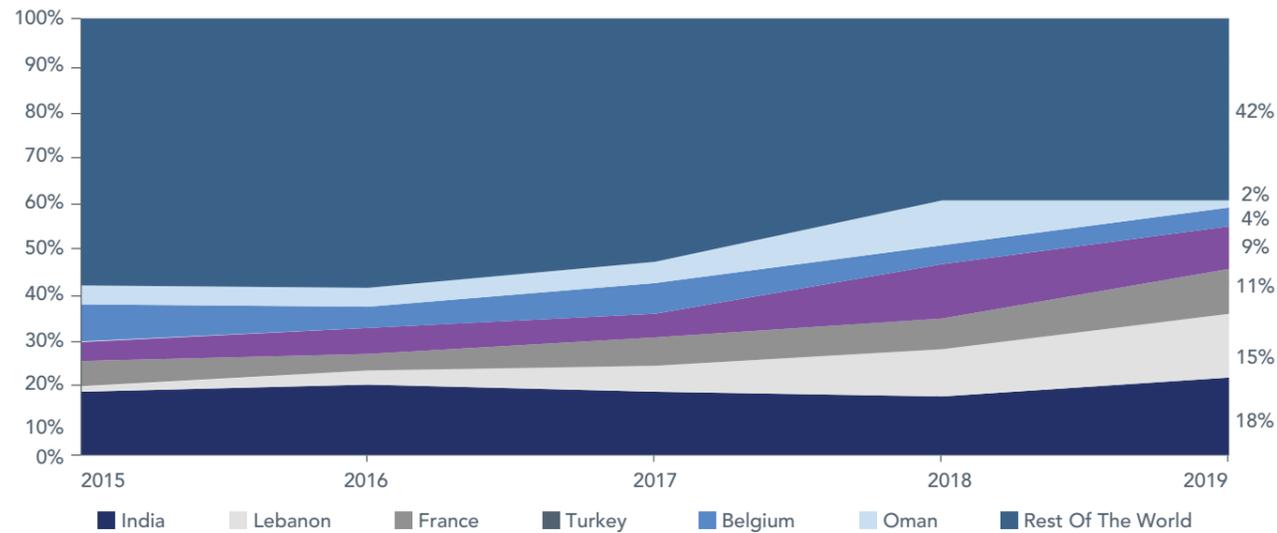
Abdul Hussain Mohammed Khoory Store (AHMKS): Established in 1942, offers a range of FMCG products (Food and Non-Food). AHMKS represent 25 brands spanning 10 categories. The company imports "Tiara" brand jelly from Foster Clark Products, Malta.



3.3 Sources of Imports

Prior to the blockade, Egypt, Saudi Arabia and India were the key sources for Qatar's jams & jellies imports. During the blockade, India, Lebanon, France and Turkey improved their market share and together covers more than 50% of the total import market. If the blockade is lifted, Qatar market would witness presence of products and competition from Egypt and Saudi Arabia again.

Chart 15: Key Sources of Jams & Jellies Imports, 2015 - 2019



Source: Team Analysis based on PSA Data

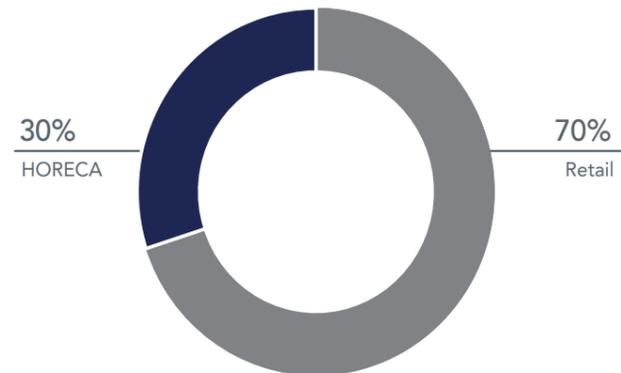
In 2019, India (18%), Lebanon (15%), France (11%), Turkey (9%), Belgium (4%) and Oman (2%) were the major sources of jams & jellies imports in Qatar. India's share over the past five years has increased from 14% in 2015 to 18% in 2019, while that of Lebanon increased from 1% to 15% during the same period, indicating that local importers have increased their demand from existing suppliers after the blockade. Share of imports from Turkey and Oman declined between 2018 and 2019.

The other countries that have significantly increased their share are Spain and Switzerland, with Spain increasing its share from mere a 0.3% in 2015 to 7.5% in 2019 and Switzerland's share improving from 0.1% to 3.3% during the same period.

Chart 16: Key Buyers of Jams & Jellies

3.4 Key Buyers in the Market

Key buyers of jams & jellies include the retail segment including organized retailers (hypermarkets, supermarkets, convenience stores) as well as small unorganized retailers and the HORECA segment.



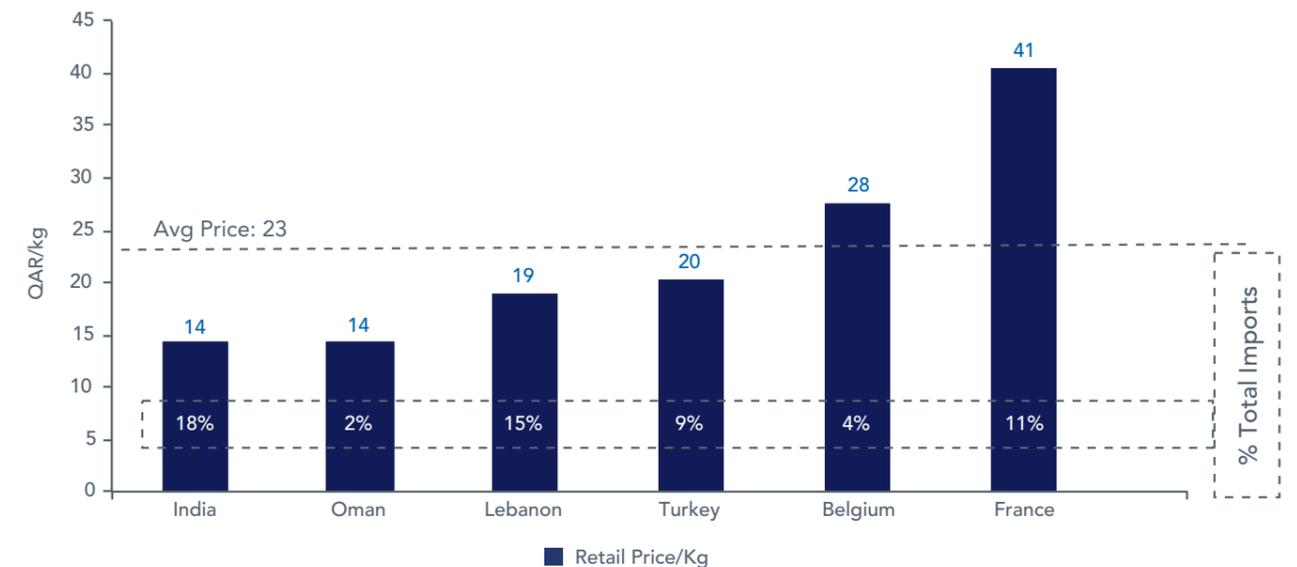
Source: Company websites

3.5 Pricing analysis

The below-mentioned prices of average retail prices of jams & jellies from the major sources that are key exporters to Qatar. India, Lebanon, France, Turkey, Belgium and Oman are the top six exporters to Qatar accounting for almost 60% share of the total import of jams and jellies. Retail prices represent average selling prices of jams gathered from supermarket and online stores in Qatar. Products that are priced more than 20% below the average retail price of 23 QAR/Kg are considered as low-priced products, products close to

the average (<20%) are considered as medium-priced products, while products that are priced more than 20% above the average price are considered as high-priced products. About 20% of imported jams (India & Oman) fall under the category of low-priced products, while 24% of imported jams (Lebanon & Turkey) fall under the medium category and 15% of imported jams (France & Belgium) fall under the category of high-priced products, thus indicating that the appetite of local consumers ranges between low to medium price range of products.

Chart 17: Jams and Jellies Source of Imports and Retail Price Comparison (2019)



Source: Market Data from Supermarkets and Online Stores

3.6 Jams & Jellies Demand Supply Forecast

As per Statista's Consumer Market Outlook Report on Jams and Marmalades, the global average per capita consumption of jams and jellies was estimated at 1.5 kilograms in 2019 and is expected to gradually grow to 1.58 kilograms by 2024 at a CAGR of 1%. Qatar's per capita consumption was estimated at 0.53 kilograms as of 2019, and historically has declined from 1.01 kilograms in 2012 in a pattern which is similar to the decline in

global consumption trends during the same period (with the exception of 2017, as a result of excess imports stockpiling during the blockade). Due to the similarity in historic consumption trends between global per capita consumption and Qatar's per capita consumption, it is estimated that Qatar's per capita consumption growth will be in line with the global growth rate of 1% per annum between 2019 and 2024.



Chart 18: Per Capita Consumption Forecast, 2019 to 2024



Source: Team analysis based on PSA Data and Statista Report on Jams & Marmalades

The demand for jams & jellies is estimated to grow from 1,491 tons in 2019 to 1,706 tons in 2024 at a CAGR of 2.7%, while in terms of value it is forecast to grow at a CAGR of 4.8% from QAR 15.5 million in 2019 to QAR 19.7 million in 2024.

Chart 19: Qatar's Jams & Jellies Demand Forecast, 2019 To 2024



Source: Team analysis based on PSA Data and Statista Report on Jams & Marmalades

The overall market for jams and jellies in terms of volume is estimated to grow in line with Qatar's population growth as well as per capita consumption growth as stated above. Based on World Bank estimates, Qatar's population is estimated to grow at the rate of 1.7% annually until 2024 while Qatar's per capita consumption is estimated to grow at 1% per annum. Thus, the overall market in terms of volume is estimated to grow at 2.7% per annum between 2019 and 2024.

The hosting of the FIFA 2022 World Cup is expected to provide a one-time boost for the jams and jellies industry. It is estimated that approximately 3.1 million tourists are expected to visit Qatar during 2022 for the event which will last for a period of almost 1 month. The global average consumption of 1.52 kilograms (0.13 Kg/month) is considered as a benchmark. Thus, during the FIFA World Cup, an estimated 393 tons of jams and jellies will be consumed additionally in 2022.

Average price of imports increased at a CAGR of 3.4% between 2014 and 2019 while overall inflation in Qatar has ranged between 1% and 3.5% during the same period. According to World Bank estimates, inflation for Qatar is estimated to range between 1.9% to 2.2% until 2024. For future growth estimates, the average price of imports is estimated to grow in line with World Bank inflation estimates for Qatar. Thus, the overall market in terms of value is estimated to grow at 4.8% per annum between 2019 and 2024.

3.7 Regulatory Analysis

General regulations related to manufacturing of jams and jellies is covered in Section 6: Regulations Concerning food production in Qatar.

General Regulations on Imports of Jams & Jellies

Direct marketing of international goods from foreign companies is allowed through local offices in Qatar. Jams & jellies can be directly marketed in Qatar through local representative offices. Imports require a license. A company that wishes to import goods into Qatar must be legally registered with the Ministry of Commerce and Industry (MOCI), according to the Commercial Registration Law No. 11. Additionally, all importers and exporters are expected to be listed in the register of the MOCI. Further, the importers must put forward a request to the Ministry of Municipality and Environment for an inspection of the premises to which they would have the goods imported to.

The Gulf Standard GSO 640 applies to jams, jellies and marmalades that are offered for direct consumption, including for catering purposes or for repacking if required. The standard covers the following:

Essential composition and quality factors:

Fruit Content:

Jams shall be produced such that the quantity of fruit ingredient used as a percentage of finished product all be not less than 45% in general, except for the following fruits:

- 35% for blackcurrants, mangoes, quinces, rambutan, redcurrants, rosehips, roselles, rowanberries and sea-buckthorns
- 30% for soursop and cranberry
- 25% for banana, cempedak, ginger, guava, jackfruit and sapota
- 23% for cashew apples
- 20% for durian
- 10% for tamarind
- 8% for passion fruit and other strong flavored or high acidity fruits

When fruits are mixed together, the minimum content must be reduced in proportion to the percentages used.

Jellies shall be produced such that the quantity of fruit ingredient used as a percentage of finished product shall be not less than 35% in general, except for the following fruits:

- 25% for blackcurrants, mangoes, quinces, rambutan, redcurrants, rosehips, roselles, rowanberries and sea-buckthorns
- 20% for soursop and cranberry
- 16% for cashew apples
- 15% for banana, cempedak, guava, jackfruit and sapota
- 11% - 15% for ginger
- 10% for durian
- 6% for passion fruit, tamarind or other strong flavored or high acidity fruits.

When fruits are mixed together, the minimum content must be reduced in proportion to the percentages used.

Citrus Marmalade shall be produced such that the quantity of citrus fruit ingredients used in the manufacturing of 1000 g of finished product must not be less than 200 g of which at least 75 g must be obtained from the fruit pulp.



Non-Citrus Marmalade shall be produced such that the quantity of fruit ingredient used as a percentage of the finished product shall not be less than 30% in general, except for the following fruits: 11% for ginger.

Other Permitted Ingredients

Any appropriate food ingredient of plant origin may be used in the products covered by this standard. This includes fruit, herbs, spices, nuts, alcoholic drinks and essential oils and vegetable edible oils and fats used as antifoaming agents, as long as they do not mask poor quality and mislead the consumer.

Quality Criteria

The product shall be of an appropriate gelled consistency, having normal color and flavor appropriate to the type or kind of fruit ingredient used in the preparation of the mixture, while considering any flavor imparted by optional ingredients or any permitted coloring agents used. It shall be free from defective materials normally associated with fruits. Jelly and extra jelly shall be reasonably clear or transparent.

Food Additives and Flavorings

All food additives shall comply with the GSO standard mentioned in clause 19.2. All food flavors shall comply with the GSO standard mentioned in clause 2.22. Flavoring substances should include natural flavoring substances that are extracted from the named fruits in the respective product; natural mint flavor; natural cinnamon flavor; vanillin, vanilla or vanilla extracts.

Microbiological Limits, Contaminants and Hygiene

Determination of microbiological limits shall be carried out according to gulf standard state in clause 12.2. Determination of metal contaminants shall be according to GSO 20 stated in clause 2.2. The hygienic requirements and rules shall comply with GSO 1694 - General principles of food hygiene.

Labeling

The following information shall be declared:

- Name of the product (Jam (or preserve or conserve), Extra Jam (preserve or conserve), High Fruit Jam (preserve or conserve), Jelly, Extra Jelly, Marmalade, Jelly Marmalade
- The name of the product shall provide an indication of the fruit(s) used in descending order of weight of the raw material used. In the case of products made with three or more different fruits the alternative phrase "mixed fruit" or similar wording or by the number of fruits may be used

- The name of the product may provide an indication of the variety of fruit e.g. "Victoria" plum and /or may include an adjective describing the character e.g. "seedless", "shred less"
- Nutritional label
- Year of production and expiration date
- Name and address of the source and country of origin
- Sugar substitutes used and its percentage
- Product address and its trademark

Original labels must be printed in Arabic. However, bilingual labels are permitted, provided Arabic is one of the languages (e.g., Arabic/English) and all the required information printed in the foreign language is also printed in Arabic.

Fruit Quantity and Sugar Declaration

Depending on the legislation or requirements of the country of retail sale, the products covered by this Standard may also give an indication of the fruit ingredient content in the form of "prepared with X g of fruit per 100 g" and the total sugar content with the phrase "total sugar content X g per 100 g". If an indication of fruit content is given this should relate to the quantity and type of fruit ingredient used in the product as sold with a deduction for the weight of any water used in preparing the aqueous extracts.

According to the GCC Standardization Organization (GSO), the GSO standard no. 150/2013 specifies the mandatory expiration periods to be mentioned on all the imported goods and the expiration date that should be recorded based on the type of packaging.

Table 18: Jams & Jellies Expiration Periods

Mandatory Expiration Periods for Jams & Jellies		
Product	Packaging Type	Expiration Date
Jam, Jellies and Marmalades	Metallic or glass containers	24 months
	Tightly sealed plastic or aluminum foil containers	12 months

3.8 SWOT Analysis

Figure 7: SWOT Analysis of Jams & Jellies in Qatar

Strengths	Weaknesses
<ul style="list-style-type: none"> • Jams, jellies and marmalades are part of daily breakfast accompaniments. • Jams are consumed on a daily-basis by all age groups. 	<ul style="list-style-type: none"> • Small domestic market and limited demand for jams and jellies. • Lack of domestic manufacturing.
Opportunities	Threats
<ul style="list-style-type: none"> • Growing awareness of health issues arising from sugar consumption have led to consumers demanding low sugar, natural and organic ingredients such as fruit concentrates, honey, herbs, etc. making the product a healthier alternative to conventional jams. • Increasing tourism resulting in rising demand from the HORECA segment. 	<ul style="list-style-type: none"> • Customers such as retail chains would prefer long-term price contracts. However, fluctuations in the prices of raw material could impact the margins and manufacturers might not be able to pass the price increase to the buyers. • Existing suppliers with established customer base make market penetration difficult for a new entrant.





3.9 Michael Porter's Five Forces Model Analysis (Jams & Jellies)

Figure 8: MICHAEL PORTER'S FIVE FORCES MODEL (JAMS & JELLIES)



3.10 Critical success factors

Table 19: Critical Success Factors for Jams & Jellies Business

Critical Success Factors for Fruit Juices in Qatar	
Parameter	Description
Scale	Scale of manufacturing is an important factor in the processing industry. Achieving economies of scale is important for business viability. Given the unique characteristics of the local market in Qatar, setting up a manufacturing facility with an appropriate installed capacity is important and should consider the current size and the expected growth in the market.
Supply Chain Efficiency	Managing the complexity of supply chain because of the nature of raw materials such as perishability and seasonality is critical. Raw materials such as fresh fruits and sugar are mostly sourced from international markets, making it crucial to have an effective and efficient supply chain capability. Strong linkages with distributors also play a key role in catering to demand across various customer segments.
Processing Technology	Technology like pre-cooling facilities, controlled atmospheric storage is critical for extended storage of raw materials (fruits) for making them suitable for further processing.
Product Innovation	Innovation through different flavors and/or packaging is essential as consumers often look for new flavors and novelty. Attractive packaging improves visibility, thereby offering a chance to boost purchase and consumption.

3.11 Future Outlook

- According to the MOCI Qatar Industrial Portal, currently there is one company (Al Manal Foods Factory) that has an installed capacity of 250 tons for processing fruit jam. However, the company mainly deals with processing of chilled and frozen fruits and vegetables but currently does not manufacture fruit jams.
- According to MOCI, there were 2 players (Partnership Juices Production and The Golden Mix Factory) who had planned to set up manufacturing facilities with a total installed capacity of 1,300 tons in 2019. However, due to unfavorable and unknown circumstances, their plans to set up the facility were discontinued.
- The total jams & jellies market in Qatar is estimated to grow to QAR 1,706 tons, valued at QAR 19.7 million by 2024, growing at a CAGR of 2.7% in terms of volume and 4.8% in terms of value.
- The production of jams and jellies should be considered as part of a diversified product portfolio rather than a standalone product, especially by existing food processing companies. A dedicated facility set up for only jams & jellies might not be viable considering the limited market.

4. CHIPS & CRISPS

4.1 Sub-sector Overview

Processing of chips and crisps is fairly an easy procedure however obtaining and handling of the raw stock plays a vital role. Process includes peeling, slicing, and washing, frying and packing. The step-by-step process is as follows:

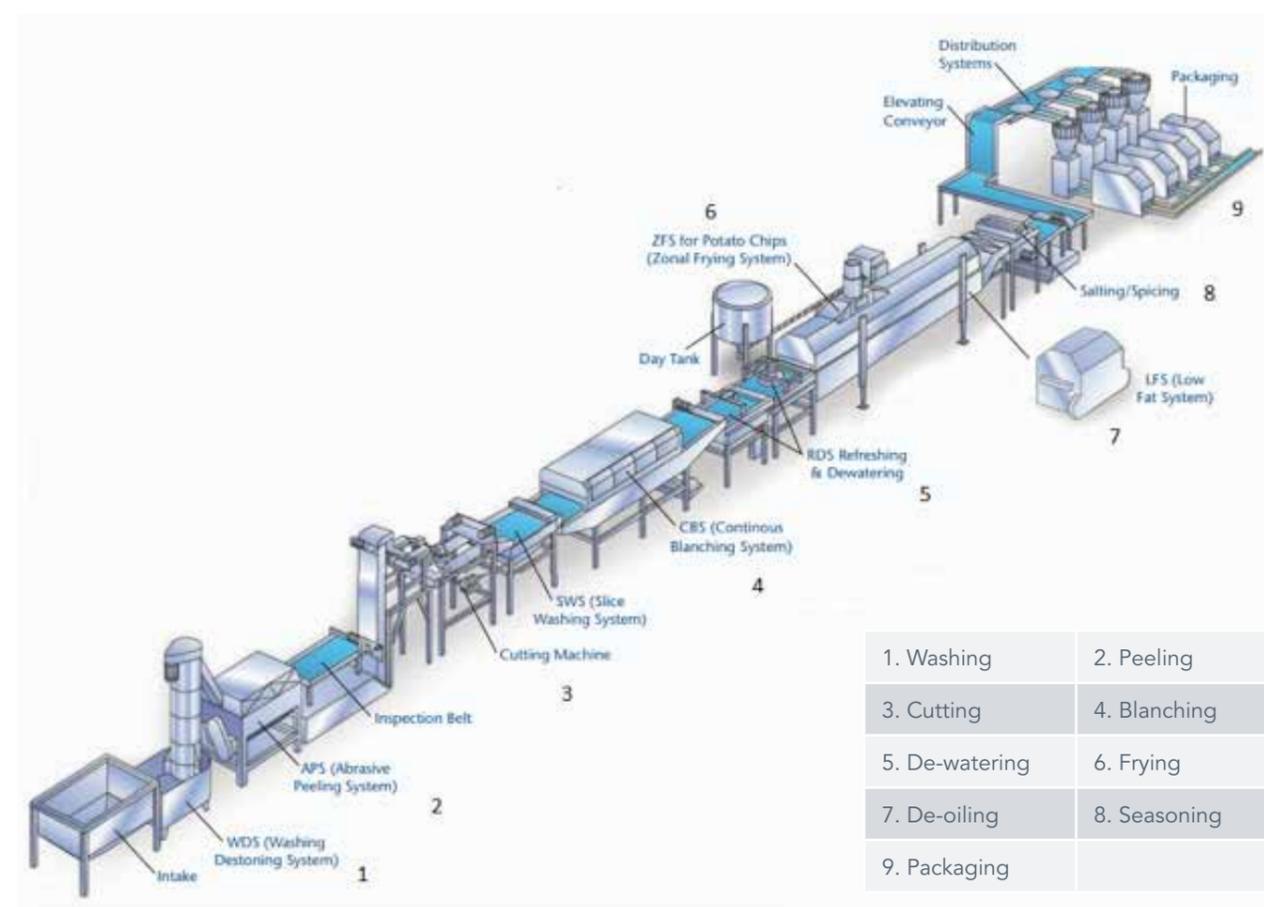
Table 20: Chip Making Process

(Note: The word 'vegetables' below is illustrative and the process can be adapted to suit the needs of specific type of vegetables, i.e., tapioca, corn, banana, potato, beetroot chips, etc.)

Step 1 Material selecting):	Fresh vegetables are selected.
Step 2 (Washing and Peeling):	Vegetables are washed and peeled to remove dirt, sand and other debris.
Step 3 (slicing):	Vegetables are sliced into the chips with the constant speed, keeping 1mm to 2mm thickness.
Step 4 (Blanching):	Chips are pre-cooked to kill harmful bacteria and to maintain original flavor of the potatoes.
Step 5 (De-watering):	Using centrifugal de-watering system, surface water from chips is removed at 60 C for 5 minutes. This increases the frying time and oil content of the final product.
Step 6 (Frying):	The chips are fried by putting it in oil at constant speed, with the oil temperature ranging between 180 C to 200 C. The chips should pass the frying pan in 2 minutes.
Step 7 (De-oiling):	Extra oil is removed using centrifugal principle from chips. This can reduce production cost.
Step 8 (Seasoning):	Different flavors are added in the chips using seasoning machine.
Step 9 (Weighing and Packaging):	Chips are packed using nitrogen packaging machine which increases shelf life without flavor loss.



Figure 9: Chips Making Process (Illustrative)



4.2 Qatar Market Overview

Processing of chips and crisps is fairly an easy procedure however obtaining and handling of the raw stock plays a vital role. Process includes peeling, slicing, and washing, frying and packing. The step-by-step process is as follows:

4.2.1 Historical Demand and Current Market Size

The chips and crisps market in Qatar was estimated at 6,602 tons in terms of volume, valued at QAR 139 million in 2019. Between 2012 and 2019, the market increased from 4,255 tons in 2012 to 6,602 tons in 2019, growing at a CAGR of 6.5%, while in terms of value, it increased from QAR 82 million in 2012 to QAR 139 million in 2019, at a CAGR of 8%.



Chart 20: Qatar's Chips & Crisps Market Size (Volume & Value), 2012 - 2019



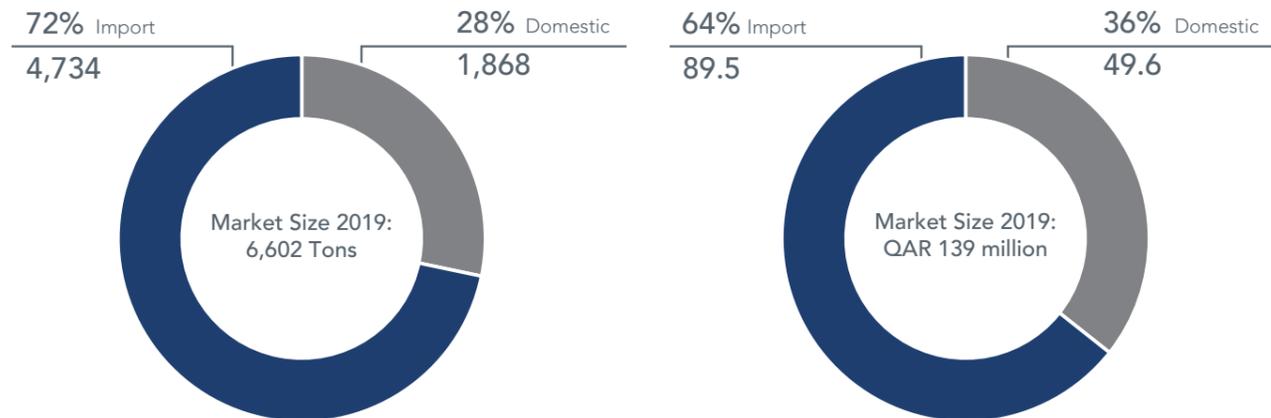
Source: Team analysis based on PSA Data and primary interviews

4.2.2 Overview of Market Segments

Prior to 2017, the chips & crisps market in Qatar used to depend majorly on imported products. Only few players have established themselves as key domestic manufacturers for this market. After 2017, the blockade provided these domestic manufacturers an opportunity to increase their market share. The

chips and crisps sector can be categorized into: (1) domestically produced, and (2) imported products. In 2019, the domestic segment accounted for 28% market share (1,868 tons) in terms of volume and 36% share (QAR 49.6 million) in terms of value, while the imported segment accounted for 72% share (4,734 tons) in terms of volume and 64% (QAR 89.5 million) in terms of value.

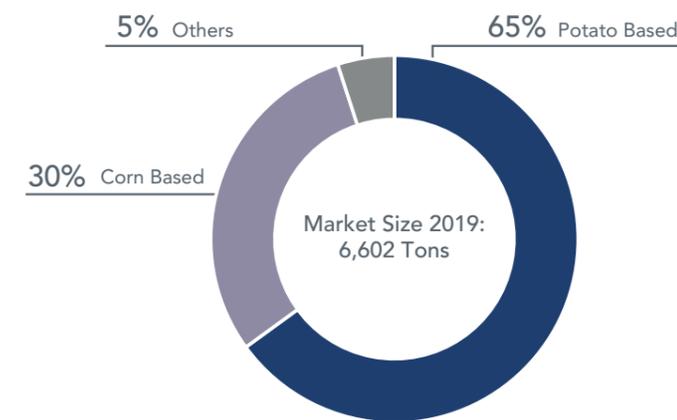
Chart 21: Chips & Crisps Market Split by Providers (Volume & Value), 2019



Source: Team analysis based on MOCI Data, PSA Data and primary interviews

Chips and crisps made from potatoes account for 65% of the market, whereas corn-based products account for 30% of the market. A relatively small portion of products (5%) are made from rice meal, banana, tapioca and a mix of vegetables.

Chart 22: Qatar's Chips & Crisps Market Size Split by Product Type, 2019

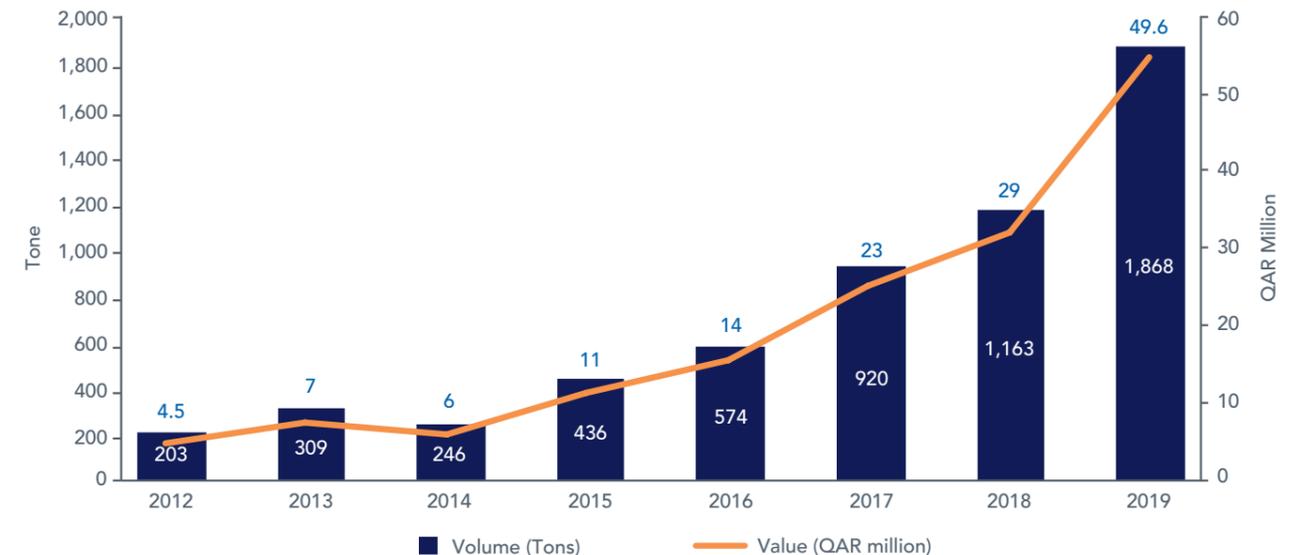


Source: Team analysis based on primary interviews

4.2.3 Domestic chips and crisps

In terms of volume, the domestic chips and crisps market increased from an estimated 203 tons in 2012 to 1,868 tons in 2019, growing at a CAGR of 37%, while in terms of value, it increased from QAR 4.5 million in 2012 to QAR 49.6 million in 2019 at a CAGR of 41%.

Chart 23: Domestic Chips & Crisps Market (Volume & Value), 2012 - 2019



Source: Team Analysis based on MOCI Data and Primary Interviews

Prior to the blockade in 2017, there were only two local manufacturers (Qatar Food Industries- Qatar Pafki and Conserved Foodstuffs- Khazan) operating in Qatar, however, as of 2020, there are a total of four local manufacturers, thus indicating the addition of two new manufacturers (Munah Food Stuff and Wholesome Oasis) operating in the market. Local manufacturers focus on production of corn-based as well as potato-based chips and crisps. Most of the local production is corn-based products, accounting for an estimated 65% of the local production, whereas potato-based products account for the remaining 35% share of the production. Local producers are more inclined towards corn-based chips and crisps as corn grits/ corn meal which is the raw material used for production is easily available and relatively cheaper than potatoes which are relatively more expensive and need to be imported from prominent exporters based in Europe and Asia.

Domestic production also received a boost since 2017, as imports of prominent brands under the PepsiCo label manufactured in the blockading countries had ceased, thus providing an opportunity for local companies to benefit from the gap in the market.

Exports of local production (1.3 tons in 2019) represents less than 1% of the production. The raw material used by domestic manufacturers which mainly include corn meal, corn grits, potatoes and vegetable oil is imported mainly from India, South Africa and European countries, and then it is processed into chips and packed for consumption. The final product is directly supplied to organized and unorganized retailers, hotels, restaurant etc., catering to the end user through established distribution networks set up by local manufacturers.

4.2.4 Overview of Domestic Chips & Crisps Manufacturers in Qatar

Qatar Food Factories Co WLL:

The Company was established in 1984 and is one of the leading Qatari companies in the snack food industry. They supply products like Crispy Corn Curls, Fried Corn (Tasty), Potato Chips, and Tortilla Corn Chips in various flavors and shapes under the brand name of Qatar Pafki. Their current factory has implemented the latest manufacturing technology/machinery and furnace made in the USA, Europe and Australia with the state-of-the-art electronic controllers. Based on data from MOCI Industrial portal and interviews with stakeholders, the company has a total production capacity of 910 tons per annum to manufacture corn-based as well as potato-based products. The capacity utilization of the factory is almost 90% operating in one shift and produces about 90% corn-based chips and crisps, while the remaining 10% are potato-based products. The company also exports a small fraction of its production to countries such as Oman, Singapore, Germany, France and Liberia.

Conserved Foodstuffs Distribution Company W.L.L. (Also known as Khazan):

The Company was established in early 2005, owned by Mezzan Holding Company based in Kuwait. After acquiring the mineral water manufacturing plant at Doha Industrial Area, the company started to produce its own brand "Aqua Gulf" Pure Bottled Drinking Water and later adding one more production facility to produce the "Dana" Pure Mineral Drinking Water range. In the chips and crisps industry, Mezzan produces key brands such as Nice, Stix, Kettle Cooked which are potato-based brand of chips and crisps and corn-based brands such as Bites, Mexita and Buggles under the KITCO brand. In late 2018, Mezzan Holding Company started manufacturing these products in its Qatar factory, which were initially produced in Kuwait. Based on data from MOCI Industrial portal and interviews with stakeholders, the company has a total manufacturing capacity of 2,960 Tons of potato and corn-based products.

The factory currently operates at less than 25% utilization operating in one shift and produces about 70% potato-based chips and crisps, while the remaining 30% are corn-based products. Since the commencement of local production of KITCO brand of chips and crisps in Qatar, the company intends to scale up its production volumes by introducing more variants of existing products as well as new brand of products under the KITCO label as it begins to capture the local market.

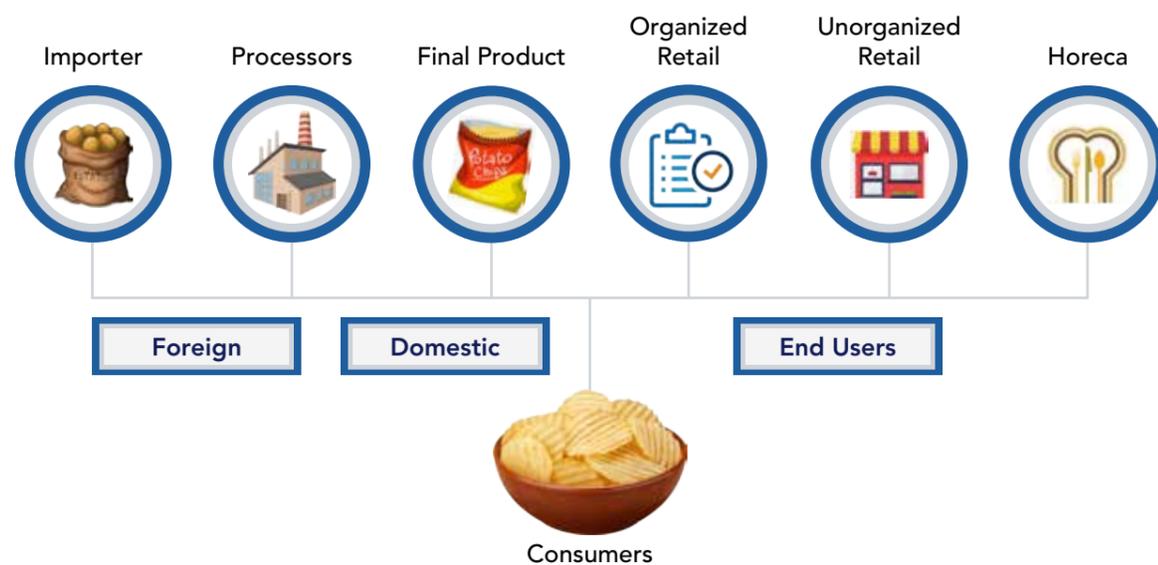
Wholesome Oasis Food Factory:

The Company is a 100% Qatari-owned company established in December 2016, with its manufacturing facility located in New Industrial Area. The company produces potato and corn-based products under the brand name of Batatos available at organized retail chains as well as local convenience stores. Their products are made from high quality raw materials such as potatoes, corn meal and sunflower oil sourced from suppliers in Europe. Based on data from MOCI Industrial portal and interviews with stakeholders, the company has a total manufacturing capacity of 863 Tons of potato and corn-based products. The factory currently operates at less than 30% utilization operating in one shift and produces about 85% potato-based chips and crisps, while the remaining 15% are corn-based products.

Munah Food Stuff Factory:

Established in 2006, the company is a subsidiary of Asak Group, which provides local snack products including crisps, chocolates and candies. In addition, Munah also provides aluminum foil products such as rolls and containers. It operates a factory with a total area of about 17,000 sqm. at the Doha Industrial Area. Its range of snacks include corn-based crisps in cheese, chilly and lemon and ketchup flavors under the brand name of SAY. Based on data from MOCI Industrial portal and interviews with stakeholders, the company has a total manufacturing capacity of 1,585 Tons and operates at less than 10% utilization operating in one shift, currently producing 100% corn-based products.

Figure 10: Chips & crisps Value Chain in Qatar



Source: Team Analysis based on Primary Interviews

4.2.3 Domestic chips and crisps

In terms of volume, the domestic chips and crisps market increased from an estimated 203 tons in 2012 to 1,868 tons in 2019, growing at a CAGR of 37%, while in terms of value, it increased from QAR 4.5 million in 2012 to QAR 49.6 million in 2019 at a CAGR of 41%.



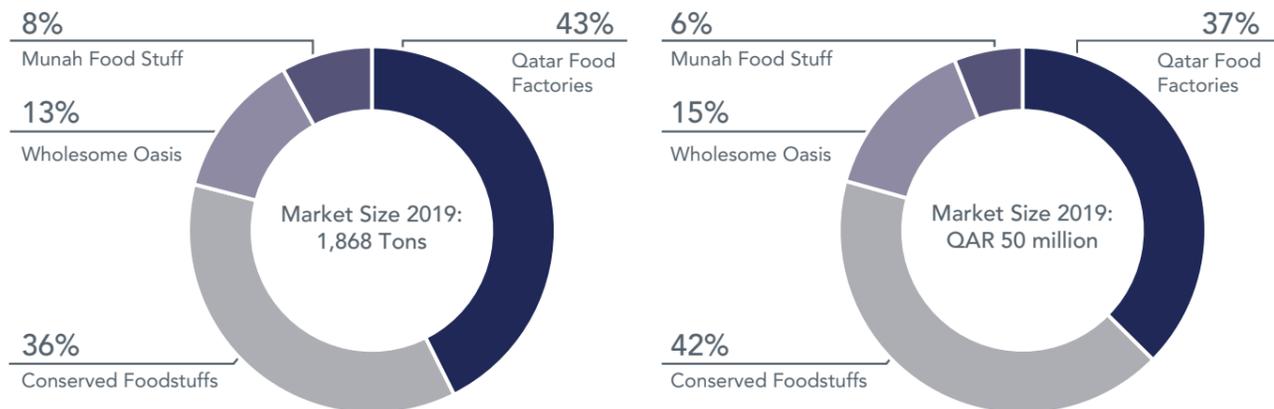
Table 21: Domestic Chips & Crisps Manufacturers in Qatar

Critical Success Factors for Chips & Crisps in Qatar	
Unit	Tons
Source	MOCI
Qatar Food Factories	910
Conserved Foodstuffs	2,960
Wholesome Oasis	863
Munah Food Stuff	1,585
Total	6,318



Source: Team Analysis based on MOCI Data, Market Data on Retail Pricing and primary interviews

Chart 24: Chips & Crisps Market Share of Domestic Players (Volume and Value), 2019



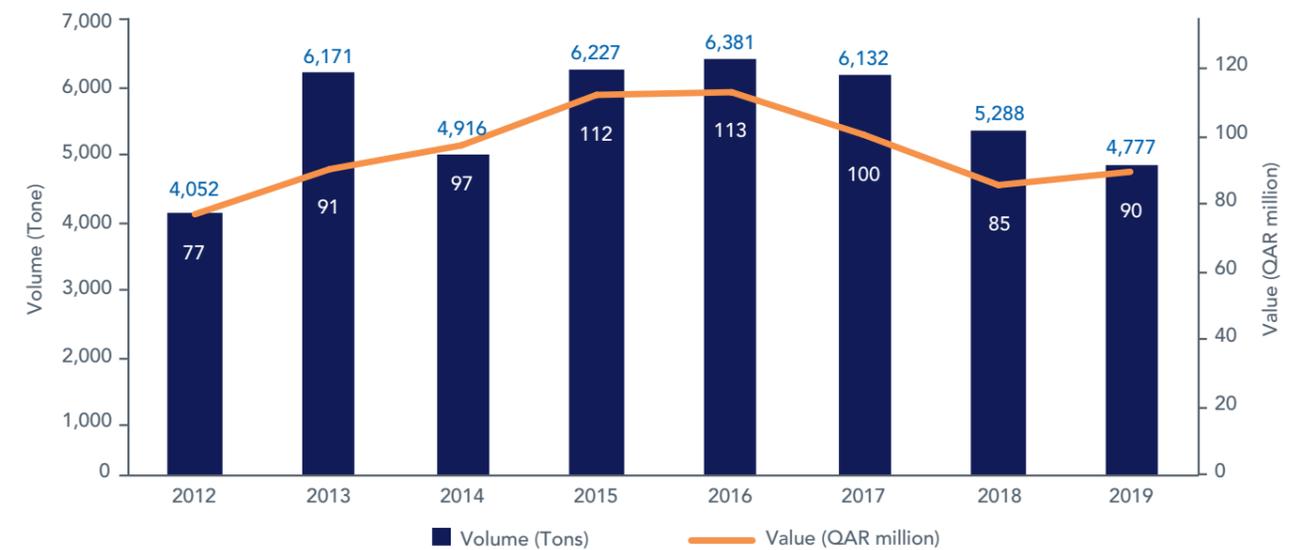
Source: Team Analysis based on MOCI Data and primary interviews

4.2.5 Imported chips and crisps

The imported chips and crisps market increased from 4,052 tons in 2012 to 4,777 tons in 2019 in terms of

volume, growing at a CAGR of 2.4%, while in terms of value, it increased from QAR 77 million in 2012 to QAR 90 million in 2019 at a CAGR of 2.2%.

Chart 25: Imported Chips & Crisps Market (Volume & Value), 2012 - 2019



Source: Team analysis based on PSA Data

After the blockade in 2017, imports started decreasing since a large majority of chips and crisps imported into Qatar were manufactured in Saudi Arabia and UAE. As a result of lack of supply from these markets, locally produced chips and crisps received a boost since prominent brands (mainly under the PepsiCo label) manufactured in the blockading countries had ceased, thus providing an opportunity for local companies to benefit from the gap in the market. Key brands under the

PepsiCo label which were initially manufactured in blockading countries are now imported from countries such as Pakistan, India, Bangladesh and Malaysia. Imports also declined to a certain extent in 2018 and 2019, since KITCO brand of products which were initially manufactured and imported from Kuwait are now being produced in Qatar since 2018 by Conserved Foodstuffs (Khazan).



[Chips & crisps]



Table 22: Chips & crisps Importers in Qatar

Potato chips & crisps Importers in Qatar		
Name	Products	Products
Transind Holding (FMCG & Distribution division)	• Chips Oman, Cheetos, Doritos, Lay's etc.	• Organized retailers • HORECA
Gulf International Enterprises	• Mamee and Bikano	• Organized retailers • HORECA
Qatar National Import & Export Co (QNIE)	• Tyrrell's, Jack N Jill and Lala (Crackers)	• Organized retailers • HORECA

4.2.6 Overview of chips & crisps Importers in Qatar

Transind Holding (FMCG & Distribution division): Transind Holding is one of the largest FMCG companies in Qatar and has wide range of products. The company's FMCG & Distribution division represents Ali Shaihani Group of Industries' brand Oman Chips which is one of the leading brands in Qatar.

Gulf International Enterprises: Established in 90's, the company started its distribution with European brands. Now they contribute around 10% in imported market of chips and crisps. They import chips from Belgium, Lebanon, Holland and Malaysia etc. Mamee and Bikano are the leading brands in their chips and crisps product portfolio.

Qatar National Import & Export Co (QNIE): QNIE, established in 1964 and now part of Al Wataniya International Holdings, is a leading FMCG distributors in Qatar. The company imports and distributes Tyrrell's from the UK, Jack N Jill and Lala from the Philippines.

Retailers such as Lulu have also been importing Salad chips from Oman, which is one the popular product in this segment from the consumer perception. There are few importers like Broadway Food Trading who only supplies to the HORECA industry. Importers have the necessary storage and distribution infrastructure including warehouses, cold storages and transport fleet.

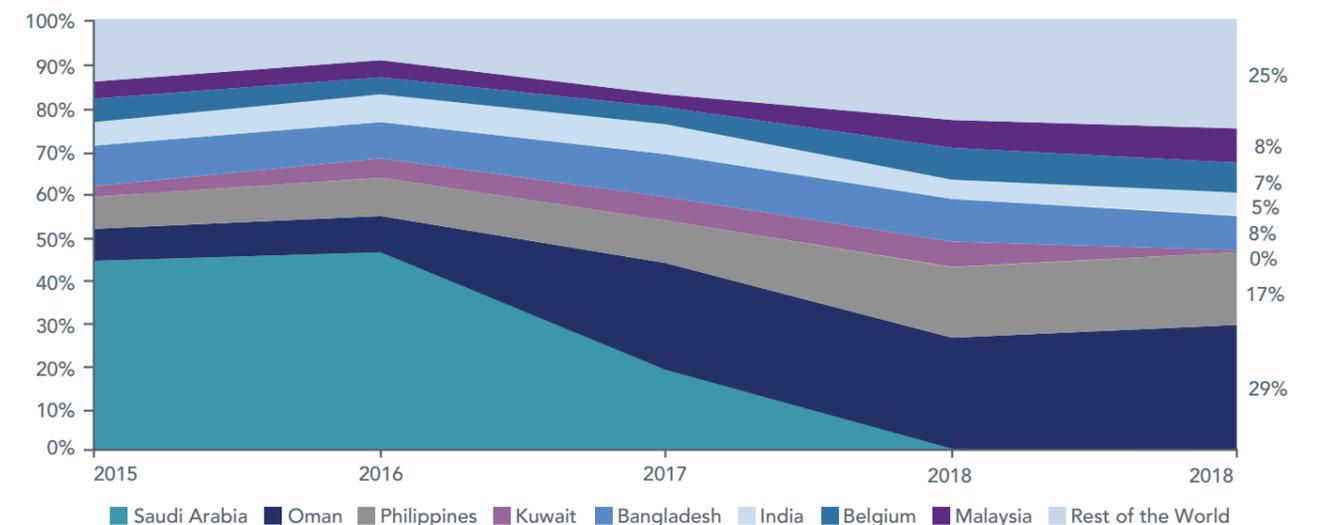


4.3 Sources of Imports

Prior to the blockade, Saudi Arabia's share was the highest in Qatar's chips and crisps market with around 46% in 2016, which declined to 0% in 2019. As of 2019, Oman (29%), Philippines (17%), Bangladesh (8%),

Malaysia (8%), Belgium (7%) and India (5%) were the top exporting countries contributing 75% of chips and crisps imports into Qatar.

Chart 26: Key Sources of Chips & Crisps Imports, 2015 - 2019



Source: Team analysis based on PSA Data

Oman is the largest exporter contributing 29% of Qatar's chips and crisps imports, mainly supplying key brands such as Chips Oman, Sohar Chips, Salad Chips and Al Muddish brand of chips and crisps to Qatar. Most brands under the PepsiCo label (Lay's, Dorito's, Cheetos) were manufactured and imported from Saudi Arabia (46%) and UAE (1%), these two countries accounted for about 47% share of the chips and crisps imported in 2016, however, after the blockade their share dropped to 0% in 2019. These brands of products initially produced in blockading countries are now sourced from countries such as Malaysia, Bangladesh, India and Pakistan. Imports from Kuwait contributed 6% share in 2017 and 2018, however, this dropped to 0% in 2019 as a result of the local manufacturing undertaken by Mezzan Holding (Conserved Foodstuff- Khazan) at its factory in New Industrial Area in Qatar. The company initially manufactured and imported several brands of chips and crisps under the KITCO label in Kuwait.

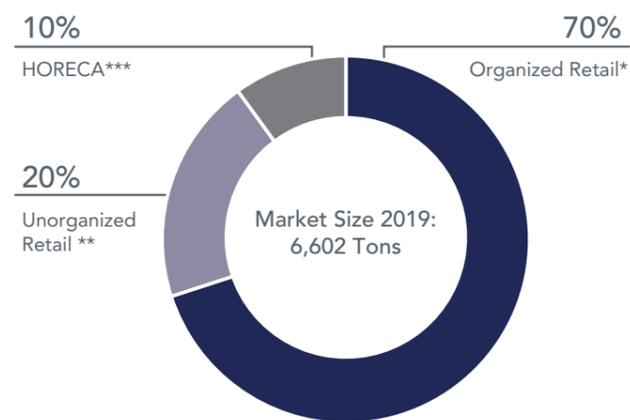




4.4 Key Buyers in the Market

Key buyers of chips and crisps include a range of establishments, such as organized retailers (hypermarkets, supermarkets, and convenience stores), small unorganized retailers and hotels, restaurants and cafes (HORECA).

Chart 27: Key Buyers of Chips & Crisps (Volume), 2019



Source: Team Analysis based on Primary interviews

* Organized Retail includes Hypermarkets, Supermarkets, and Convenience Stores

** Unorganized Retail includes local convenience/small stores known as Baqalas

*** HORECA (Hotels, Restaurants & Cafes)

Retailers & HORECA

The sale of potato chips & crisps happen through traditional retail formats such as local convenience stores as well as modern retail formats including hypermarkets, supermarkets and convenience stores.

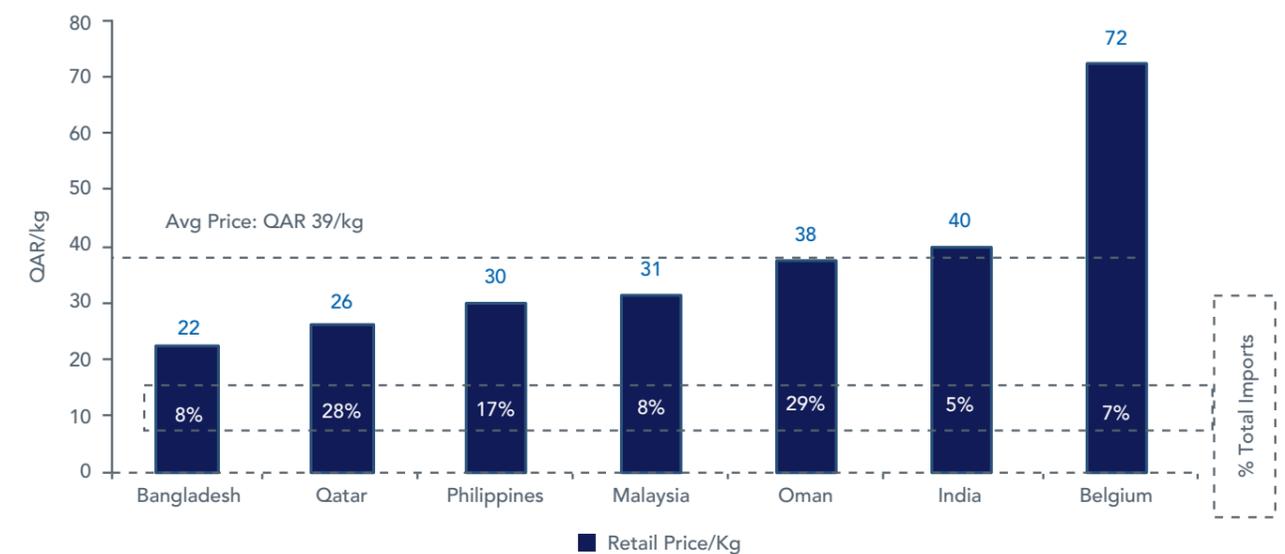
There is an increasing trend towards modern retail formats as these offer multiple product varieties and options, discounts and offers and convenience of purchasing multiple products under one roof. As a result, snack companies are selling their products through supermarkets and hypermarkets. This enables them to come up with more SKU options, display larger product varieties, launch new flavors and products and sell multi-packs by means of offers, etc.

The HORECA segment often uses potato chips, crisps and corn snacks as an important part of their offerings.

4.5 Pricing analysis

The below-mentioned chart compares the average retail price per kilogram of chips and crisps (potato and corn-based) from local manufacturers as well as from major sources that are key exporters to Qatar. Oman, Philippines, Bangladesh, Malaysia, Belgium and India were the top exporting countries contributing 75% of chips and crisps imports into Qatar. Products that are priced more than 20% below the average retail price of 39 QAR/Kg are considered as low-priced products, products close to the average (<20%) are considered as medium-priced products, while products that are priced more than 20% above the average price are considered as high-priced products. About 34% of the total imported (and 28% domestic) chips and crisps fall under the category of low-priced products, while 34% of imported products (Oman and India) fall under the medium category and 7% of imported chips (Belgium) fall under the category of high-priced products, thus indicating that the appetite of local consumers ranges between low to medium price range of products.

Chart 28: Chips and Crisps Source and Retail Price Comparison



Source: Market Data from Supermarkets and Online Stores

* - % of total market

The range of costs for various components of domestic products is shown in table 23. Expenses on raw materials account for about 20-30% of the total cost of locally produced chips and crisps. Profit margin can range between 8% and 15%, depending on cost of raw materials, order volumes, discounts

and customer-manufacturer relationship. Organized retailers form the majority share of end user segments and their mark-ups range from 20-50%, whereas mark-ups for importer/distributors range from 20-35% and majority of their supply goes to the organized retail segment.

Table 23: Cost Analysis of Domestic and Imported Chips & Crisps

Domestic Chips & Crisps Pricing Analysis		Imported Juices Retail Pricing	
Component	Range	Importer/Distributor Mark-up	20-35%
Raw Materials	20-30%	Retailer Mark-up	20-50%
Salaries	10-15%	Retailer Mark-up	40-50%
Rent	10-15%		
Selling/Marketing & Distribution	10-15%		
Operational cost	15-20%		

Source: Team Analysis based on Primary Interviews



4.6 Chips and Crisps Demand Supply Forecast

The demand for chips and crisps is estimated to grow to 8,476 in 2024 from 6,602 tons in 2019 at a CAGR of 5.1% in terms of volume, while in terms of value it is forecast to grow at a CAGR of 7.8% from QAR 139 million in 2019 to QAR 203 million in 2024.

Chart 29: Qatar's Chips & Crisps Demand Forecast, 2019 - 2024



Source: Team Analysis based on MOCI Data, PSA Data and primary interviews

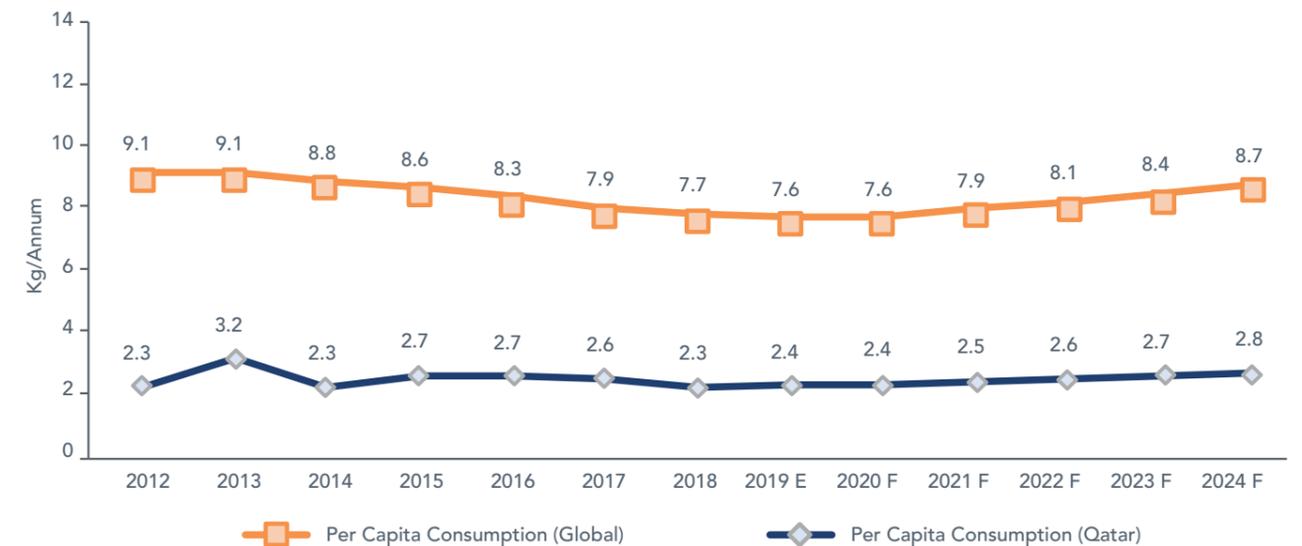
Demand Forecast

As per Statista's Consumer Market Outlook Report on Snack Foods, the global average per capita consumption of chips and crisps was estimated at 7.6 kilograms in 2019 and is expected to gradually grow to 8.7 kilograms by 2024 at a CAGR of 3.4%. Qatar's per capita consumption was estimated at 2.36 kilograms as of 2019, and historically has declined from 2.32 kilograms in 2012 in a pattern which is similar to the decline in global consumption trends during the same period. Due to the similarity in historic consumption trends between global per capita consumption and Qatar's per capita consumption, it is estimated that Qatar's per capita consumption will grow in line with the global growth rate of 3.4% per annum between 2019 and 2024. The overall market for chips and

crisps consumption in terms of volume is estimated to grow in line with Qatar's population growth as well as per capita consumption growth. Based on World Bank estimates, Qatar's population is estimated to grow at the rate of 1.7% annually until 2024. Thus, the overall market for chips and crisps is forecast to grow at a CARG of 5.1% between 2019 and 2024.

The hosting of the FIFA 2022 World Cup is expected to provide a one-time boost for the chips and crisps industry. It is estimated that approximately 3.1 million tourists are expected to visit Qatar during 2022 for the event which will last for a period of almost 1 month. The global average chips and crisps consumption of 7.6 Kg/annum (0.63 Kg/month) is considered as a benchmark. Thus, during the FIFA World Cup, an estimated 1,963 tons of additional chips and crisps will be consumed in 2022.

Chart 30: Per Capita Consumption Forecast, 2019 to 2024



Source: Team analysis based on PSA Data and Statista Report on Snack Foods

Supply Forecast

Domestic manufacturers have successfully managed to capture the local market after the blockade, which is evident from the fact that their market share has increased from 13% in 2017 to 28% share in 2019. The local manufacturing of KITCO brand of products by Conserved Foodstuffs in 2018 as well as the setting up of Wholesome Oasis and Munah Foodstuffs factory in 2019 are key examples of strengthening of the domestic sector and promotion of import substitution. According to MOCI data, there are 3 new players that are in process of setting up new manufacturing facilities that will commence operations from 2020-2021 onwards, thus local manufacturers have adequate installed capacity to capture the future growth in demand. Going forward, it is estimated that the share of domestic manufacturers will gradually increase from 28% share in 2019 and will achieve 35% share by 2022, further increasing to 40% market share by 2024.

Average price of domestic chips and crisps increased at a CAGR of 2.3% between 2015 and 2019 while imports increased by 1.2% during the same period. According to World Bank estimates, inflation for Qatar is estimated to range between 1.9% to 2.2% until 2024. For future growth estimates, the average price of domestic and imported chips and crisps has been estimated to grow at a similar rate of 2.3% and 1.2% respectively per annum in line with historical price increase trends as well as World Bank inflation estimates for Qatar. Thus, the overall chips and crisps market in Qatar in terms of value is estimated to grow at 7.8% per annum between 2019 and 2024.



4.7 Demand Supply Gap Analysis

Qatar's chips and crisps market was estimated at 6,602 tons in 2019, while domestic installed capacity was estimated at 6,318, thus indicating a shortfall in capacity of about 284 tons. According to MOCI data, there are 3 new players that are in process of setting up new manufacturing facilities (Delight Food Industries, Al Waseel Foodstuffs and Baz Food Industries) and will add a total capacity of 1,147 tons from 2020-2021 onwards, thus increasing the total installed capacity to 7,465 between 2020 and 2024. Local manufacturers face stiff competition from international brands such as Lay's, Dorito's, Hunter's, Lorenz, Roger's, and several other brands which were initially imported from blockading countries but are now imported from countries such as Malaysia, Pakistan, India, Bangladesh, etc. Apart from capturing the market in terms of product offerings and competitive prices, local manufacturers have adequate capacity to cater to the growing demand.

4.8 Regulatory Analysis

General regulations related to manufacturing of chips and crisps is covered in Section 6: Regulations Concerning food production in Qatar.

General Regulations on Imports of chips and crisps

Direct marketing of international goods from foreign companies is allowed through local offices in Qatar. Potato chips and crisps can be directly marketed in Qatar through local representative offices. Imports generally require a license. A company that wishes to import goods into Qatar must be legally registered with the Ministry of Commerce and Industry (MOCI), according to the Commercial Registration Law No. 11. Additionally, all importers and exporters are expected to be listed in the register of the MOCI. Further, the importers must put forward a request to the Ministry of Municipality and Environment for an inspection of the premises to which they would have the goods imported to.

GCC Unified Customs Regulations

Under QS 9/1996, food labels must contain the following information on the original label or primary packaging:

- Product and brand names
- Ingredients in their descending order of proportion
- Additives
- Net contents in metric units (volume in case of liquids)
- Dates of production and expiry
- Manufacturer's name and address
- Country of origin
- Special storage, transportation and preparation instructions, if any

Original labels must be printed in Arabic. However, bilingual labels are permitted, provided Arabic is one of the languages (e.g., Arabic/English) and all the required information printed in the foreign language is also printed in Arabic.

Arabic language stickers are permitted in lieu of original Arabic or bilingual labels, provided the sticker is extremely difficult to remove, includes all required label information, does not cover required information on the original label and does not contradict the information on the original label. In fact, local officials consider such stickers to be labels.

According to the GCC Standardization Organization (GSO), the GSO standard no. 150/2013 specifies the mandatory expiration periods to be mentioned on all the imported goods and the expiration date that should be recorded based on the type of packaging.

Table 24: Chips and Crisps Expiration Periods

Mandatory Expiration Periods for Chips & Crisps		
Product	Packaging Type	Expiration Date
Fried Chips and Crisps	Suitable containers	8 months

GCC Standardization Organization (GSO)

4.9 SWOT Analysis

Figure 11: SWOT Analysis of chips and crisps

Strengths	Weaknesses
<ul style="list-style-type: none"> • Chips and crisps are considered as one of the most popular and affordable snack foods consumed by all age groups. • Increase of local manufacturers from two producers in 2018 to four producers in 2019. These manufacturers can provide high quality products with a wide range of flavors and multiple product variants at competitive prices. • Government support for national/local made products. • Well-developed storage and transportation infrastructure (air/sea cargo handling, cold storages, warehouses). 	<ul style="list-style-type: none"> • Domestic market is largely dependent on imports. • Challenges to maintain high quality standards stipulated by the government. • Stiff competition from well-established players due to preference of consumers for prominent international brands such as Lay's, Dorito's, Hunter's, Lorenz, Roger's, etc. and regional brands such as Chips Oman, Sohar Chips, Al Muddish, etc. • Manufacturing is highly dependent on imported raw materials as well as machineries in absence of local vendors for raw materials and food processing equipment.
Opportunities	Threats
<ul style="list-style-type: none"> • Growing hospitality and tourism industries. • Substantial growth in demand creating ample space for a new player. • Growing demand of Made in Qatar products. • Changing lifestyles and long working hours have led to significant rise in demand for ready to consume snacks globally as well as in Qatar. • A huge potential can be derived from the growing organized retail channels such as hypermarkets and supermarkets. • Focus on new flavors and product variants such as baked and kettle cooked chips and crisps. 	<ul style="list-style-type: none"> • Due to limited market size there are high chances of losing market share because of increase in competition. • Fluctuations in raw material prices could put pressure on margins and the local manufacturers may not be able to pass on the price increase to the consumer. • Shift in consumption patterns may impact demand, as consumers opt for more healthier options instead of snack foods which are considered high in fat, salt and artificial flavors. • Large organized retail players may introduce "own label" products by leveraging economies of scale in purchasing, access to large end consumers and lower pricing.





4.10 Michael Porter's Five Forces Model Analysis - Chips and Crisps

Figure 12: Michael Porter's Five Forces Model (Chips and Crisps)



4.11 Critical success factors

Table 25: Critical Success Factors for Chips and Crisps Business

Critical Success Factors for Chips and Crisps in Qatar	
Parameter	Description
Access to raw materials	Due to limited availability of locally produced raw materials such as potatoes, corn meal and vegetable oil, it is imperative to secure suppliers for raw materials for various flavors and from different regions. Establishing long term contracts with suppliers is important for better pricing and ensuring continuity in supply.
Marketing	Creating strong awareness about the locally manufactured products is essential. With several players offering similar products, building strong brand awareness and association, differentiation through offering wide variety of flavors, ensuring consistent good quality and trustworthy image should be of high priority.
Customer relationship	Retail chains are the major customers of chips and crisps companies. A consumer-oriented approach is vital for operation in the local market with a strategy focusing on buyer needs. This can be achieved by understanding customer requirements, establishing a robust distribution network and maintaining adequate stock levels to meet customer replenishment cycles.
Knowledge of the market	Knowledge of the market includes listening to customers (retail chains) and end consumers, being aware of recent developments with respect to the market, production, manufacturing processes etc., identifying trends and being keen on customer satisfaction.
Investment in machinery	The quality of machinery is important while developing a manufacturing facility. Sourcing the right mix of machinery can ensure consistency in quality, optimum production rates and can contribute to operational efficiency.
Capacity Utilization	The capacity utilization needs to higher to ensure the viability of the manufacturing unit. Investing in capacity addition as and when required by understanding and analyzing market dynamics is important.

Source: Team Analysis based on Primary Interviews



4.12 Future Outlook

- The growth in this market will be driven by the inclination and preference of consumer perception towards local brands, government support for domestic manufacturers and Qatar's initiatives for local farming which will reduce dependency of manufacturer on imported raw material.
- With changing lifestyles, consumers are increasingly opting for ready-to-consume snack foods such as chips and crisps because of convenience, easy availability and anytime consumption. Consumers are also increasingly becoming aware of health and wellness benefits as compared and are now demanding for chips that use new cooking techniques instead of being fried and demand for ingredients that are healthier and do not contain artificial flavors and colors.
- Large working and young population will also drive the demand as changing lifestyles and long working hours gives them less time to spend on consuming full meal and instead opt for convenient snack foods such as chips and crisps. The growth in organized retail chains, F&B outlets as well as the growth in hotels will contribute to the growth in demand in Qatar.



5. PROCESSED VEGETABLES

5.1 Sub-sector Overview

Processed vegetables include three main product categories, 1) Vegetables that are Canned or Prepared or Preserved using multiple processing techniques, 2) Frozen Vegetables and 3) Packaged Vegetables.

The process of making frozen and packaged vegetables is as follows:

Table 26: Packaged Vegetables Making Process

Step 1	Inspection and preliminary preparation: Vegetables from producers/importers are inspected and washed.
Step 2	Conditioning: Vegetables are processed manually or by machines (peeling, cutting, grating and shredding).
Step 3	(For packaged vegetables) Sterilizing & Packing: Vegetables are sterilized immediately after cutting and packaged in sealed vacuum packs in desired weights to avoid contact with air and for preserving fresh cut flavor.

Figure 13. Packaged Vegetables Making Process

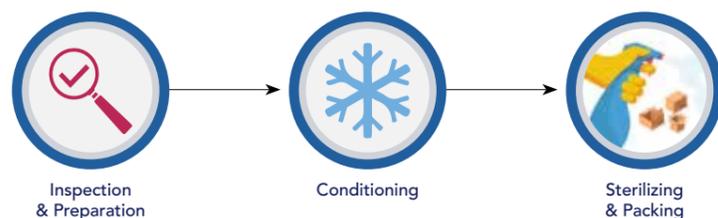
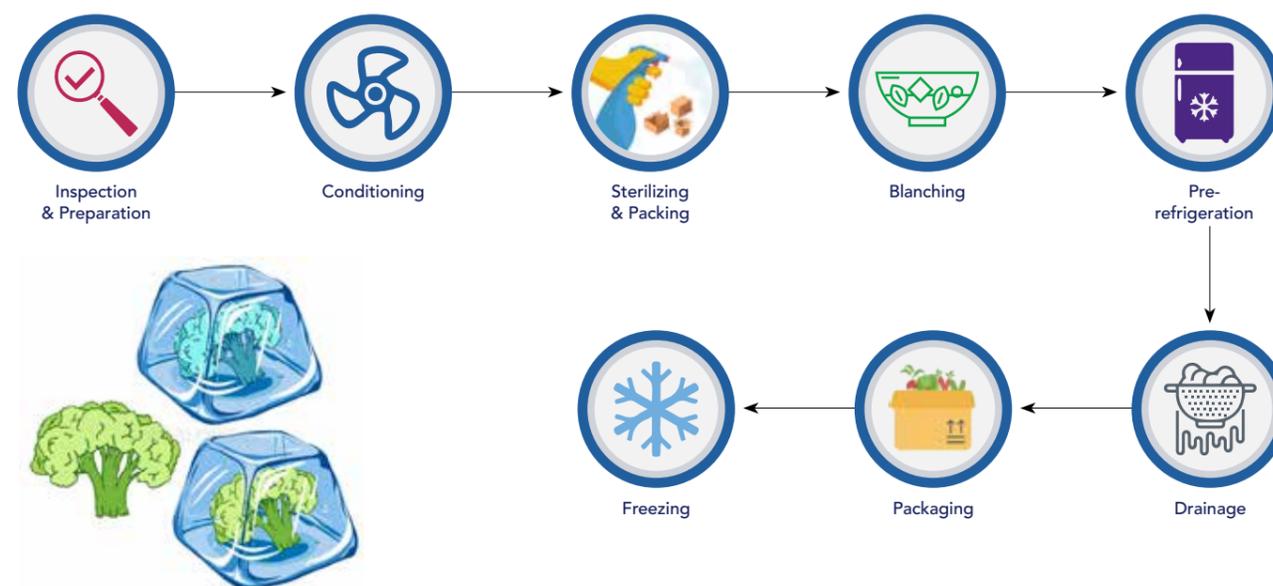


Table 27: Frozen Vegetables Making Process

Step 1	Inspection and preliminary preparation: Vegetables from producers/importers are inspected and washed.
Step 2	Conditioning: Vegetables are processed manually or by machines (peeling, cutting, grating and shredding).
Step 3	Blanching: Vegetables are blanched in boiling water or steam for a short time. Blanching stops enzyme actions that can cause loss of color, flavor and texture. It also cleans the surface of organisms and dirt and helps delays vitamin loss.
Step 4	Pre-refrigeration: After blanching, the vegetables are cooled in order to avoid the high temperature to which the vegetable tissue was exposed to cause excessive losses of nutrients. The lowering of temperature also prevents production of contaminant microorganisms that can deteriorate vegetable tissues. This cooling may be performed through an ice bath, by pouring the vegetables into stainless steel tanks containing the frozen water.
Step 5	Drainage: After cooling with frozen water, the vegetables should undergo a drainage process for elimination of the excessive water that settles on the vegetable tissues.
Step 6	Packaging: The vegetables are then wrapped in high-density polyethylene (HDPE) bags in desired weights, with low permeability to both oxygen and moisture.
Step 7	Freezing: Slow freezing process is safer than quick freezing, as the later causes large ice crystal formation resulting in textural changes of the produce. It can also lead to loss of flavor and color. It is necessary to take care of the freezing chamber design in order to provide a good distribution of the air.

Figure 14: Frozen Vegetables Making Process



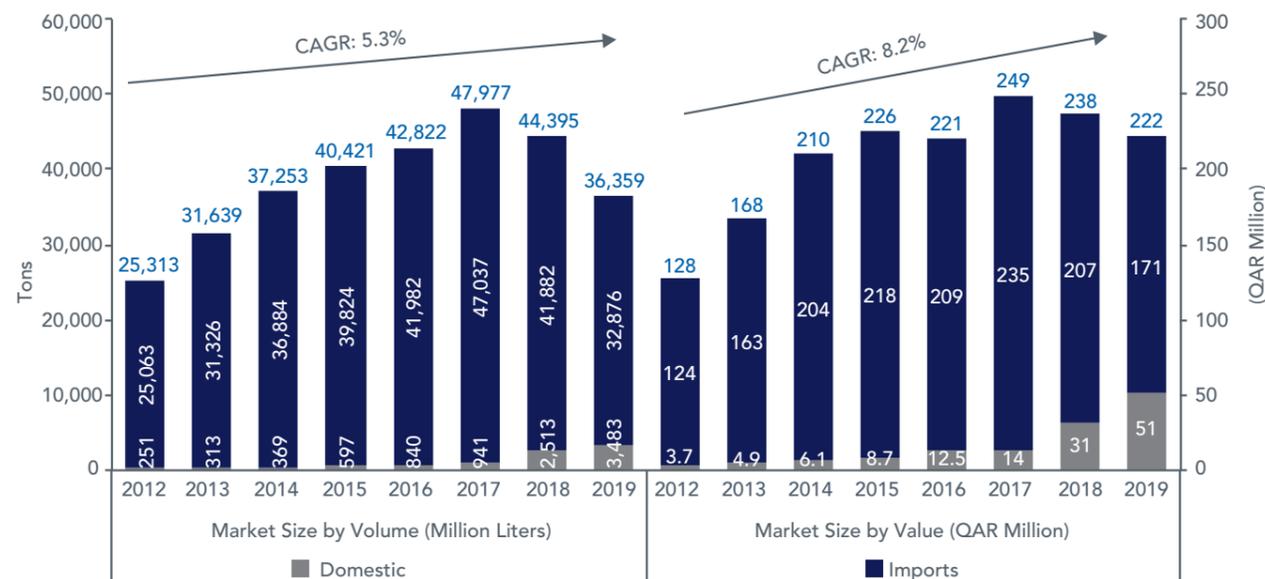


5.2 Qatar Market Overview

5.2.1 Historical Demand and Current Market Size

The market size was estimated at 36,359 tons in terms of volume and was valued at QAR 221.7 million in 2019. Between 2012 and 2019, the market increased from 25,313 tons in 2012 to 36,359 tons in 2019, growing at a CAGR of 5.3%, while in terms of value, it increased from QAR 128 million in 2012 to QAR 221.7 million in 2019, at a CAGR of 8.2%.

Chart 32: Qatar's Processed Vegetables Market Size (Volume & Value), 2012 - 2019



Source: Team analysis based on PSA Data and primary interviews

Processed vegetable market in Qatar mainly depends on imports from other countries. The level of processing of vegetables into cut and packed or frozen or canned food items in Qatar is currently at very small and at its nascent stage given the limitations of cultivation of crops in the country. Historically between 2017 and 2019, a declining trend was observed in the market for processed vegetables. Three key factors could be considered as the reasons for this decline, 1)

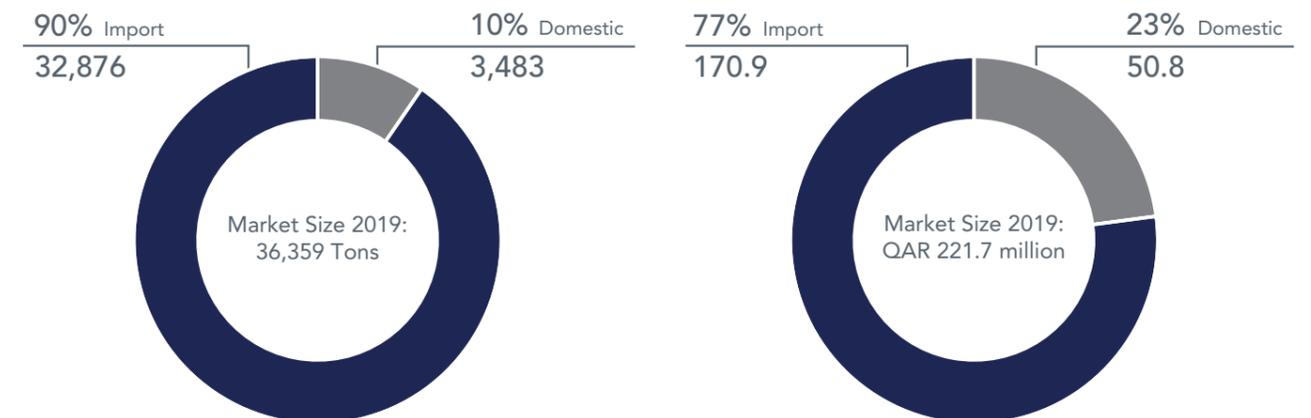
Traditional preference of consumers who would choose to buy fresh produce instead of processed vegetables, 2) Reduction in imports from blockading countries, and 3) Qatar's efforts to increase its self-sufficiency by cultivating food locally, thus prompting consumers to purchase local fresh produce, have impacted the overall demand for processed vegetables during this period.

5.2.2 Overview of Market Segments

Earlier, the processed vegetables market in Qatar used to depend mainly on imported products. As of 2019, only three players have established themselves as key domestic manufacturers for this market. After 2017, the blockade provided these domestic manufacturers with an opportunity to increase their production volumes and capture higher market share. The sector

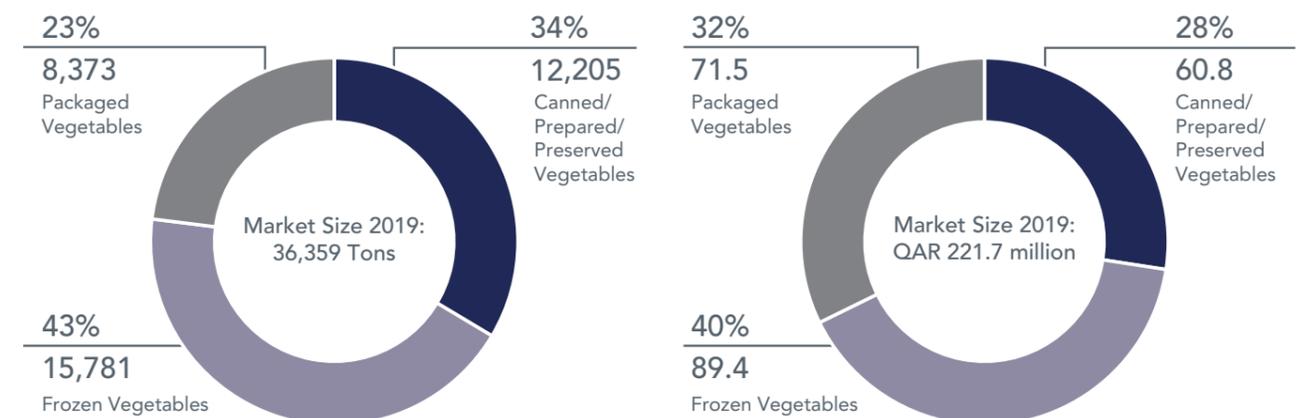
can be categorized into 1) domestic and 2) imported processed products. In 2019, the domestic segment accounted for 10% market share (3,483 tons) in terms of volume and 23% share (QAR 50.8 million) in terms of value, while the imported segment accounted for 90% share (32,876 tons) in terms of volume and 77% (QAR 170.9 million) in terms of value.

Chart 33: Processed Vegetables Market Split by Providers (Volume & Value), 2019



Source: Team analysis based on MOCI Data, PSA Data and primary interviews

Chart 34: Packaged Vegetables Market Size Split by Product Type, 2019



Source: Team analysis based on MOCI Data, PSA Data and primary interviews



5.2.3 Domestic packaged vegetables

In terms of volume, the domestic segment increased from an estimated 251 tons in 2012 to 3,483 tons in 2019, growing at a CAGR of 46%, while in terms of value, it increased from QAR 3.7 million in 2012 to QAR 50.8 million in 2019 at a CAGR of 45%.

Chart 35: Domestic Processed Vegetables Market (Volume & Value), 2012 – 2019



Source: Team Analysis based on MOCI Data and Primary Interviews

In the domestic segment, there are currently 3 local manufacturers (Al Manal Foods Factory, Al Raed Food Processing Factory and Themar Factory) engaged in local processing of vegetables and their production is limited to frozen potatoes, tomato pastes/ketchup, pickles and packaged vegetables.



5.2.4 Overview of Domestic Processed Vegetable Manufacturers in Qatar

Al Raed Fresh Food Processing Factory: The Company was established in 2010 by the promoters of Abu Khalifa Trading Establishment. The company focuses on fresh cut fruits and vegetables, packaged vegetables, frozen potatoes and preparation on tomato paste/ketchup. Al Raed Fresh has grown from a small wholesale markets-based operator to a national wholesaler supplying supermarkets, catering companies, hotels and restaurants. The company has a frozen line for fruits and vegetables for the local market, and a fresh-cut production line, providing most of the catering for the food service and retail sectors. Al Raed has a packing and sorting system for local growers and one of the largest chiller systems in Qatar, capable of storing up to 11,000 tons.

Al Manal Foods Factory: The Company is a fully owned Qatari Company established in 2018, located in the Doha New Industrial City. On an 8,000 sq.

meters land, a two-storey factory was constructed with a total area of 12,000 sq. meters and 22 walk-in cold stores. The company operates a purpose-built food processing facility designed to serve hospitality and industrial catering establishments offering sanitized and hygienically produced ready-to-use peeled and cut vegetables, fruits, potatoes, onion, garlic as well as French fries, spiced potato wedges, spice pre-mix, pickles and portion control condiments. Their products can be private labelled, branded and custom made to suit their client requirements and specifications.

Themar Factory: Established in 2018, the company is engaged in the production of tomato pastes/ketchup as well as fruit juice drinks under the brand name of Damaa. The company has a production capacity of 100 tons per annum for tomato pastes.

Table 28: Domestic Processed Vegetables Manufacturers in Qatar

Company	Product	Description
Unit	(Tons)	(Tons)
Source	MOCI	MOCI
Al Manal Foods	Frozen Potatoes	1,000
	Tomato Paste/ Ketchup	300
	Pickles	150
	Packaged Vegetables	1,800
Al Raed Fresh	Packaged Vegetables	750
	Frozen Potatoes	3,000
	Tomato Paste/ Ketchup	500
Themar Factory	Tomato Paste/ Ketchup	100
Total		7,600

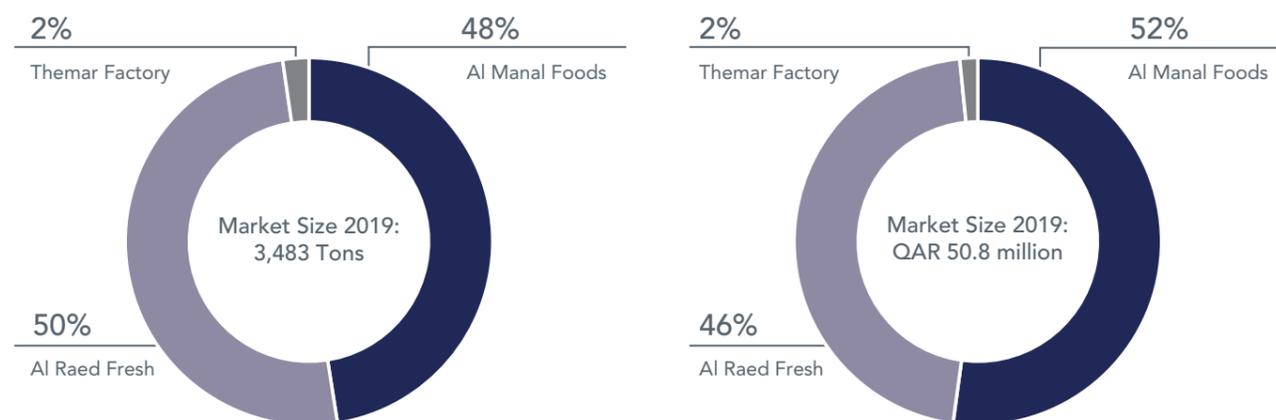
Source: Team Analysis based on MOCI Data, Market Data on Retail Pricing and primary interviews



Al Manal and Al Raed are the two largest players together with 98% share of the market in terms of value and volume. Both these players are mainly engaged in the producing frozen potatoes, tomato pastes and packaged vegetables. Al Manal

also engaged in the production of pickles. Themar Factory is a relatively smaller player in the tomato pastes segment with about 2% volume and value share of the market, mainly supplying to organized retail chains like Al Meera and Lulu.

Chart 36: Processed Vegetables Market Share of Domestic Players (Volume and Value), 2019

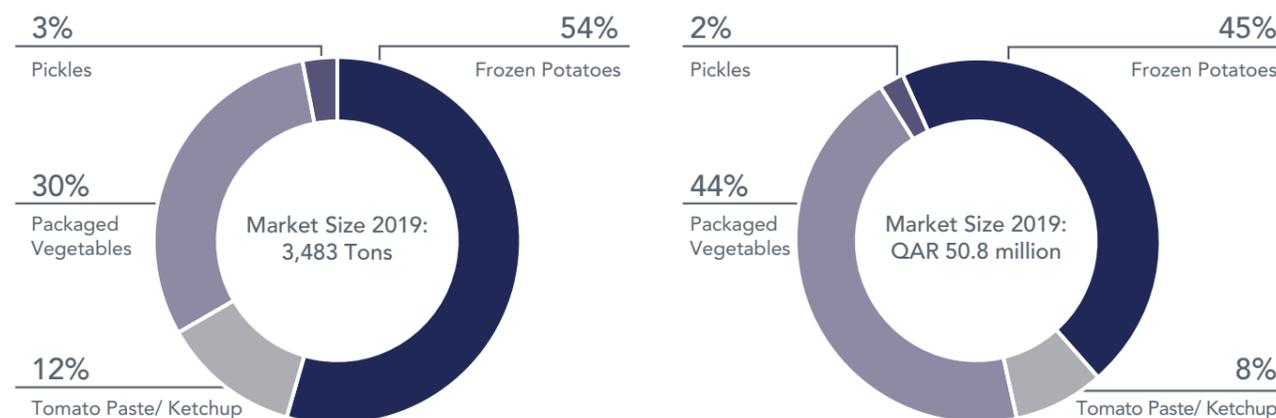


Source: Team Analysis based on MOCI Data and primary interviews

In terms of product mix, frozen potatoes account for the largest segment with 54% of the domestic market by volume, followed by packaged vegetables with 30% share and pickles with 3%

share. In terms of value, the share of frozen potatoes and packaged vegetables is almost the same with about 45% share for each of these segments, followed by pickles with 2% share.

Chart 37: Domestic Processed Vegetables Market by Product Mix, 2019

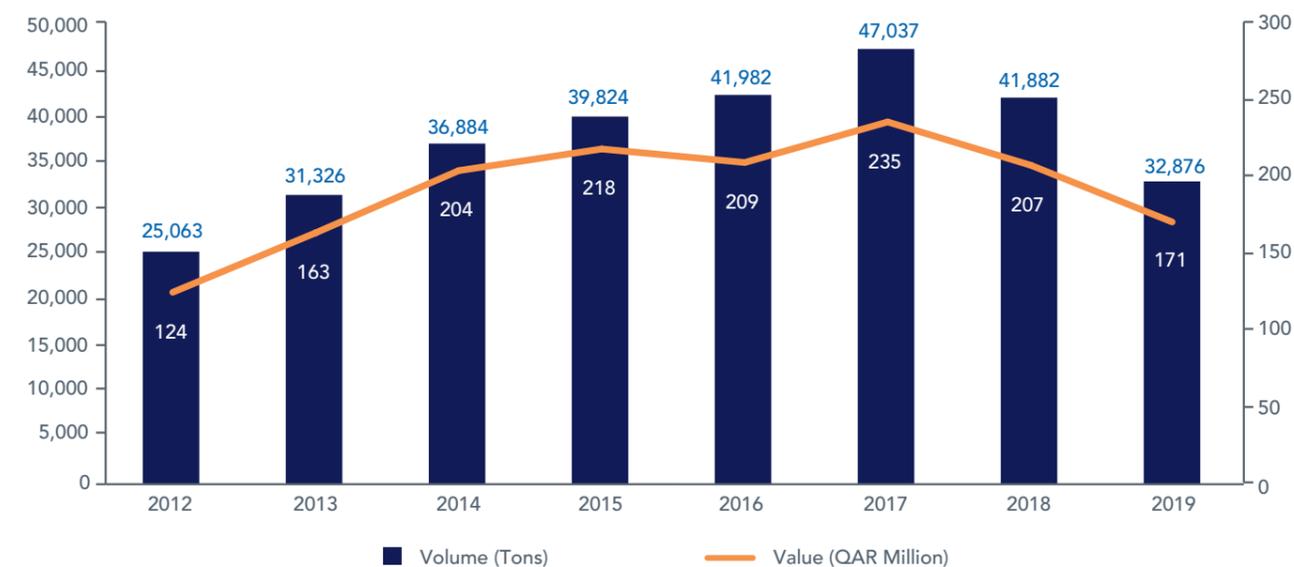


Source: Team Analysis based on MOCI Data and Primary Interviews

5.2.5 Imported Processed Vegetables

The imported processed vegetables market increased from 25,063 tons in 2012 to 32,876 tons in 2019 in terms of volume, growing at a CAGR of 4%, while in terms of value, it increased from QAR 124 million in 2012 to QAR 171 million in 2019 at a CAGR of 4.7%.

Chart 38: Imported Processed Vegetables Market (Volume & Value), 2012 - 2019



Source: Team analysis based on PSA Data

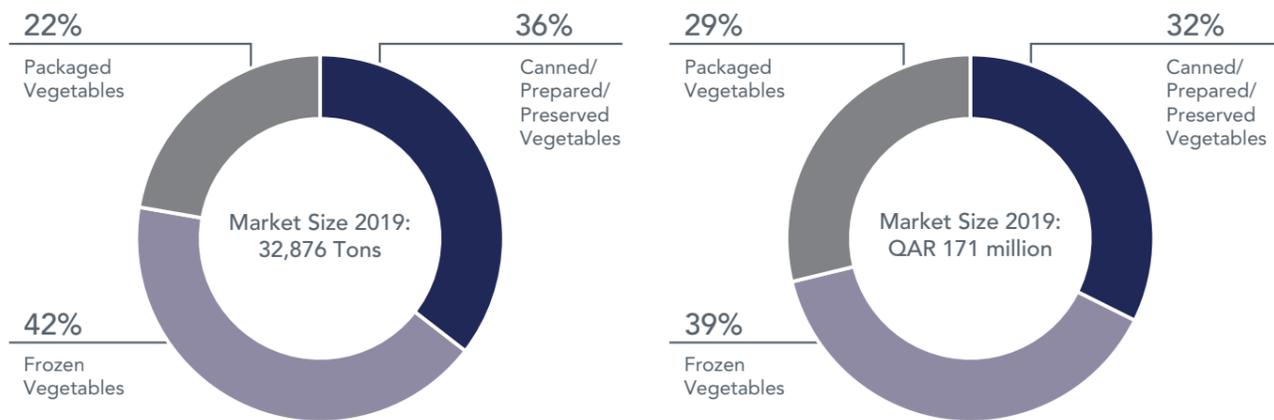
After the blockade in 2017, imports started decreasing as a large majority of processed vegetables (between 35% to 40%) were imported into Qatar from UAE and Egypt. As a result of lack of supply from these markets, the country increased its share of imports from other partner countries such as the Netherlands, Belgium, Italy, China and USA. However, this decline in supply also provided an opportunity for domestic manufacturers to enter the market by setting up key food processing factories equipped with the latest processing techniques. This resulted in the share of domestic manufacturers increasing from 2% in 2016 to 10% share of the market in 2019. However, the level of processing in the country is limited due to consumer preference for purchasing fresh produce and relatively small portion of domestically cultivated fresh produce. Most of the raw materials processed by domestic manufacturers rely on imports to a large extent and they source local raw material produce to a smaller extent.

In terms of imported processed vegetables product category, frozen vegetables account for the largest segment with 42% volume and 39% value share of processed vegetables imports, followed by canned/ prepared/ preserved vegetables with 35% volume and 32% value share of imports, while packed vegetables accounts for the remaining 22% volume and 29% of value share of processed vegetables imports.

In terms of imported processed vegetables product mix, frozen potatoes account for the largest segment with 39% volume and 35% value share of processed vegetables imports, followed by tomato pastes with 10% volume and 7% value share of imports. Other key products imported include canned broad beans, pickles, canned olives, canned beans and grape leaves.

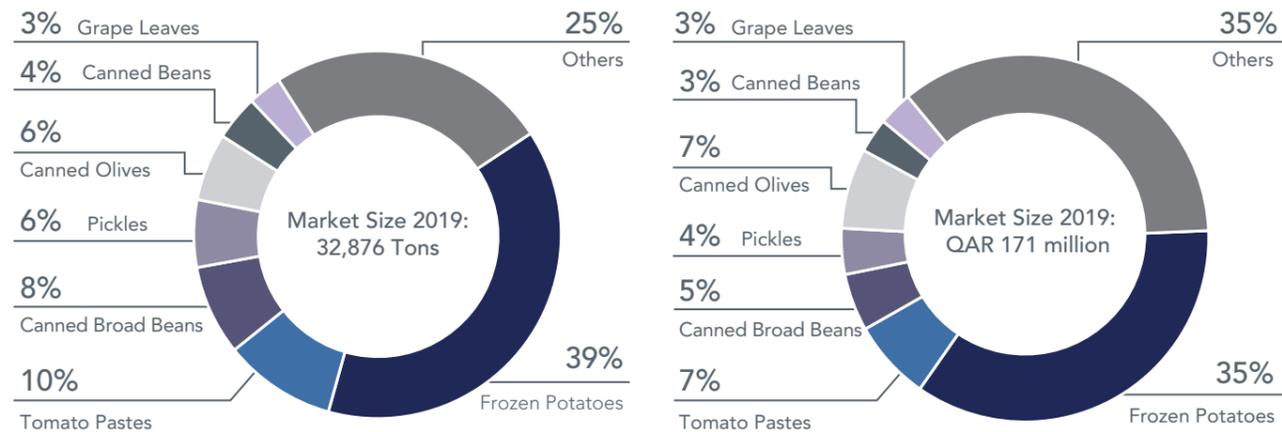


Chart 39: Imported Packaged Vegetables by Product Category, 2019



Source: Team analysis based on PSA Data

Chart 40: Imported Packaged Vegetables by Key Product Mix, 2019



Source: Team analysis based on PSA Data

Table 29: Packaged Vegetables Importers in Qatar

Processed Vegetables Importers in Qatar		
Name	Products	Description
CGT International	• Fruits, Juices, Fresh Vegetables, Meat, Fish	• Organized retailers • HORECA
Gulf International Enterprises	• Frozen vegetables, Fish cans, rice	• Organized retailers • HORECA
Arizona Trading Co.	• Frozen, Chilled, Dry, Beverages	• Organized retailers • HORECA
Harvest International Trading, (part of NAAAS Group)	• Fruits and Vegetables, Poultry products and seafood	• Organized retailers • HORECA
Qatar National Import & Export Co (QNIE)	• Canned food such (peas, beans, corn, spinach, mixed vegetables), olives and pickles, cereals and snacks	• Organized retailers • HORECA
Doha Food Service	• Canned Beans, Tomato Paste, Peas, Broad Beans, Salt, Mustard Oil	• Organized retailers • HORECA
Friendly Food Qatar	• Canned food, peeled tomatoes, vegetable puree, canned olives.	• Organized retailers • HORECA
Barakati Foods	• Canned peas, tomato paste	• Organized retailers • HORECA





5.2.6 Overview of Packaged Vegetables Importers in Qatar

CGT International: CGT Group is one of the largest trading companies in the Netherlands (Amsterdam), the regional office in Qatar (Doha) and surrounding areas internationally in the field of global trade and the establishment and management of agricultural and industrial projects. CGT Group provides services from sources such as Agricultural Equipment, Juices, Vegetables, Arabic gum, frozen potatoes, etc.

Gulf International Enterprises: Gulf International Enterprises is a premier consumer goods company based in Doha, Qatar established in the 90s with a concept of importing and distribution of finest quality consumer goods. Their product portfolio ranges from beverages to snack food, frozen meats, pulses, varieties of rice and various other consumer goods.

Arizona Trading Company: Arizona Trading Company Qatar was acquired by Sadita in March 2006. The principle activities of the Company are distributing frozen and processed products through importing the international brand food supplies. The company is trying to increase its share in the Qatar market through introducing and acquiring new products, markets. Their retail department serves hyper, supermarkets, wholesalers and HORECA department serves hotels, restaurants, hospitals, fast food snacks and airlines.

Harvest International Trading part of NAAAS Group: NAAAS Group for Real estate Project Management and Development is a Qatari company serving in Industrial, Agricultural and Real Estate Investments.

Qatar National Import & Export Co (QNIE): The company was established in 1964 and now part of Al Wataniya International Holdings, is a leading FMCG distributors in Qatar engaged in distribution of dairy products, meat, poultry, seafood, edible oils, pasta, snacks, soft drinks, juices, mineral water, coffee, cakes and frozen foods. The company imports and distributes canned food, olives and pickles, cereals and snacks.

Doha Food Services: The company is a sub-division of Remote Site Middle East engaged in food import and distribution. Key brands imported and distributed by the company include Q Garden, Wavel, Easy Clean and Nirvi Bhog.

Friendly Food Qatar (FFQ): The company is a professional ISO-certified food distribution company established in 1978. FFQ provides various categories of food products as well as disposable items to public institutions and private companies throughout Qatar and the MENA region.

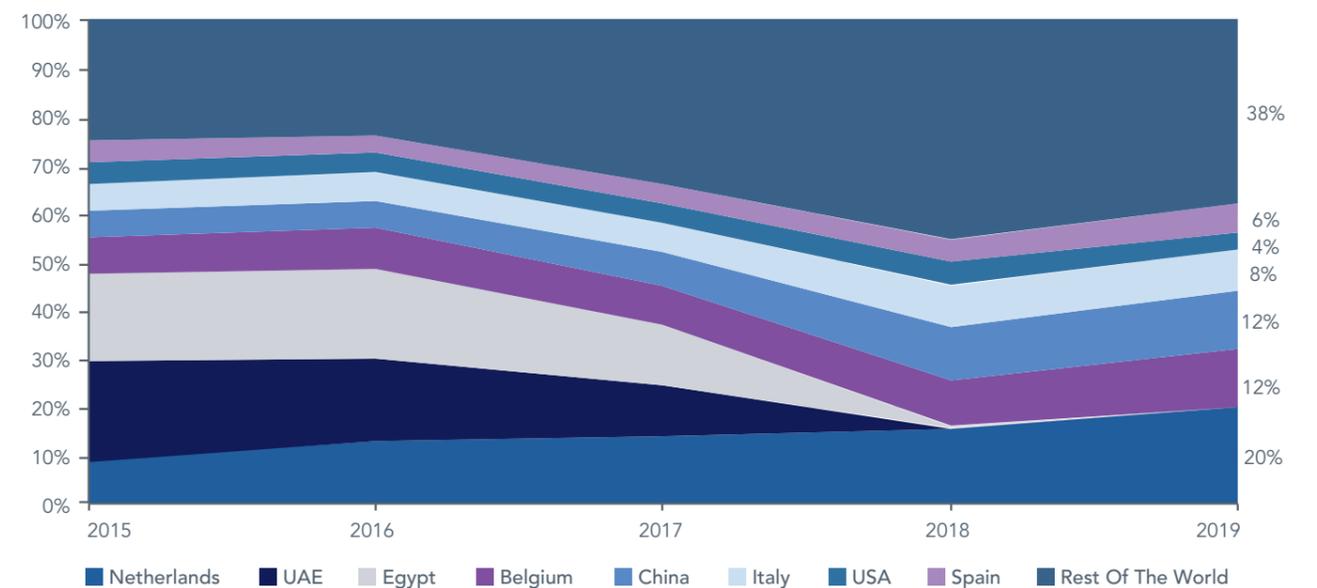
Barkati Foods: Barkati Foods is one of the leading FMCG Distributor for the food industry based in the State of Qatar. Barkati Foods distributes a wide range of food products ranging from canned foods, oil, rice, tea and other non-food products imported from around the world.

5.3 Sources of Imports

Prior to the blockade until 2016, processed vegetables import from UAE and Egypt contributed between 35% to 40% of Qatar's imports, however, the share of imports from these countries dropped to 0% after the blockade and subsequently the share of imports increased from other partner countries such as the Netherlands, Belgium, Italy, China and USA. As of 2019, Netherlands (20%), Belgium (12%), China (12%), Italy (8%), Spain (6%) and USA (4%) were the top exporting countries contributing 62% of processed vegetables imports into Qatar.



Chart 41: Key Sources of Processed Vegetable Imports, 2015 – 2019

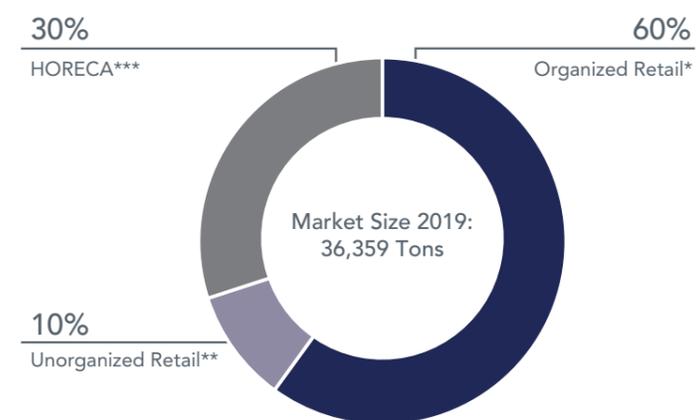


Source: Team Analysis based on PSA Data

5.4 Key Buyers in the Market

Key buyers of packaged vegetables include organized retailers (hypermarkets, supermarkets, convenience stores) and hotels, restaurants and cafes (HORECA).

Chart 42: Key Buyers of Processed Vegetables



Source: Team Analysis based on Primary interviews

* Organized retail includes hypermarkets, supermarkets

** Unorganized retail includes local convenience stores

*** HORECA (Hotels, Restaurants & Cafes)



Organized and Unorganized Retailers

Consumers are increasingly purchasing processed vegetables as components to be included in ready-to-serve meals. Consumers are looking at simplified meal-preparation consisting of ingredients requiring minimum preparation and clean-up. Major retailers are extending their private label brands targeting the frozen food category including vegetables. A large part of the shelf space for frozen food is being taken over by the retailers.

Hotels, Restaurants and Cafes

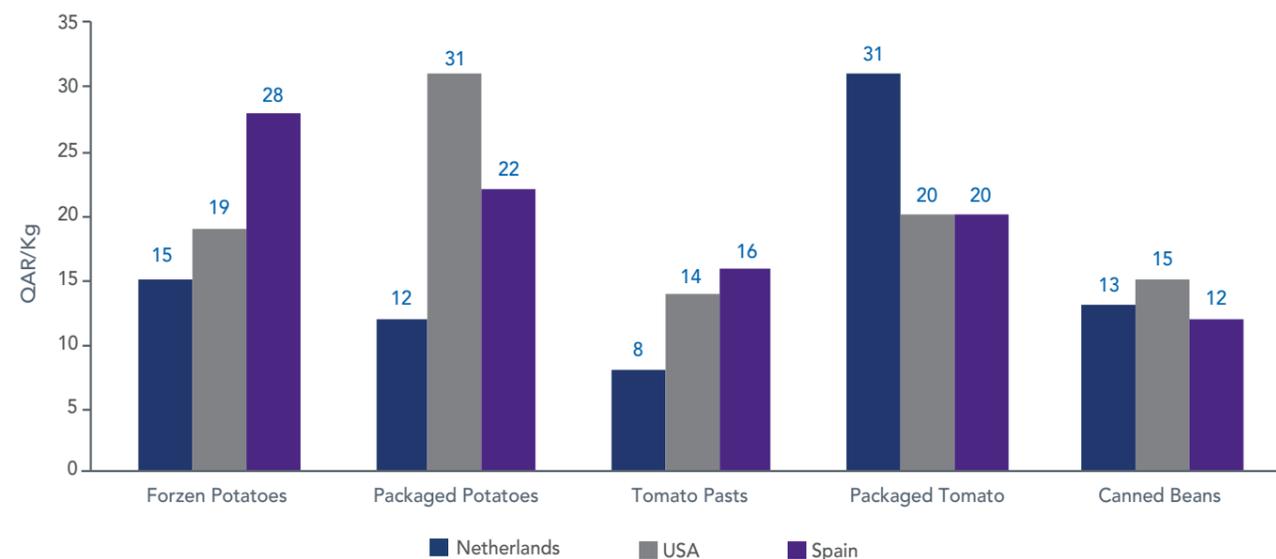
The HORECA industry uses frozen food items regularly to save time for preparation and cooking. Frozen and packaged items are also convenient to use because of better consistency and the advantage that flavours also remain intact. Working with fresh food ingredients often leads to operational constraints. Washing, chopping and shredding of fresh vegetables requires more time resulting in increased preparation time and higher labor costs.

5.5 Pricing analysis

The retail price of key products such as frozen potatoes, packaged potatoes, tomato pastes, packaged tomatoes and canned beans from leading exporters to Qatar were analyzed to compare their pricing. Packaged vegetables and frozen vegetables are priced on the higher side as

compared to canned products. The prices of canned products such as tomato paste and canned beans are found to be between 35% to 45% lower than that of frozen and packaged vegetables, with a minor exception resulting from the country of import.

Chart 43: Processed Vegetables Retail Price Comparison



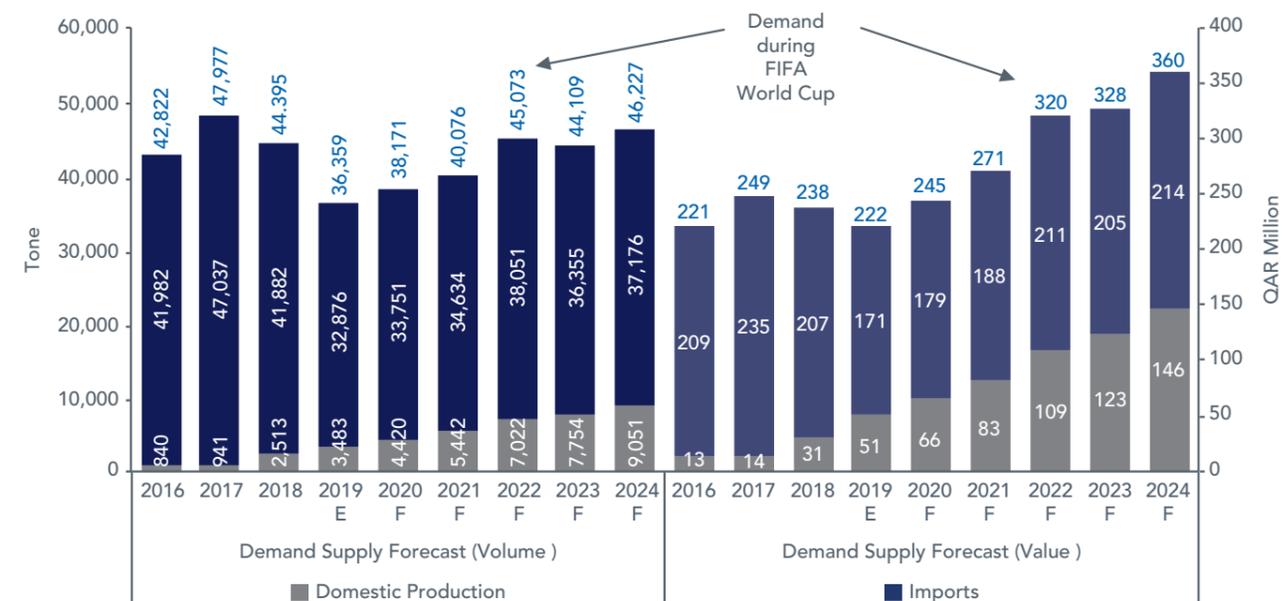
Source: Market Data from Supermarkets and Online Stores

5.6 Processed Vegetables Demand Forecast

The processed vegetables market is estimated to grow from 36,359 tons in 2019 to 46,227 tons in 2024 at a CAGR of 5%, while in terms of value it is forecast to

grow at a CAGR of 10.2% from QAR 222 million in 2019 to QAR 360 million in 2024.

Chart 44: Qatar's Packaged Vegetables Demand Forecast, 2019 – 2024



Source: Team analysis based on primary interviews

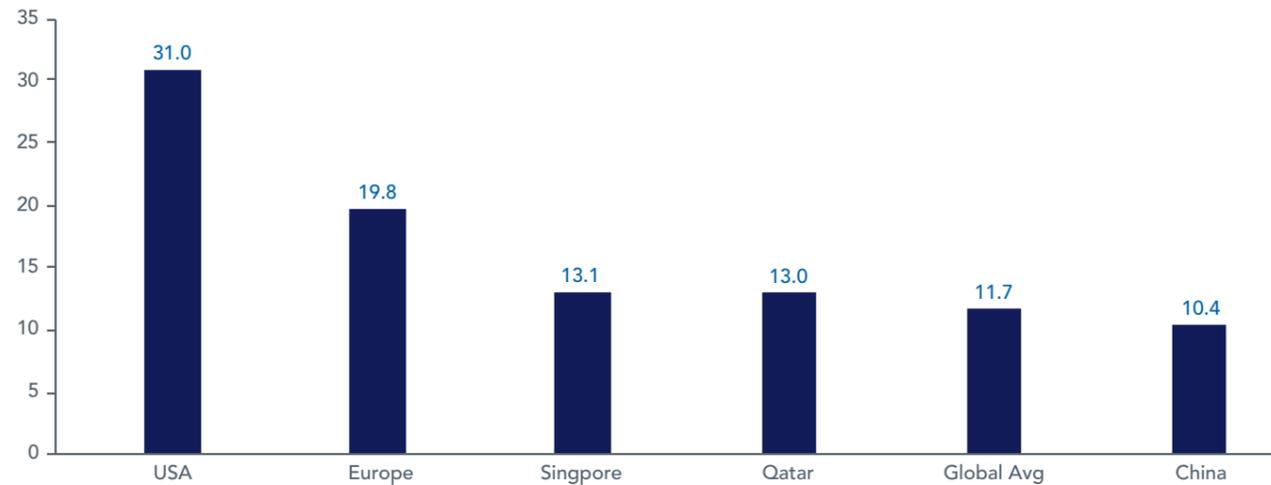
Demand Forecast

As per Statista's Consumer Market Outlook Report on Processed and Frozen Vegetables, the global average per capita consumption was estimated at 11.7 kilograms in 2019 and is expected to gradually grow at a CAGR of 3.2% between 2020 and 2025. Qatar's per capita consumption was estimated at 13 kilograms as of 2019, which is slightly higher than the global average. Going forward, Qatar's per capita consumption is estimated to grow in line with the global growth rate of 3.2% per annum between 2019 and 2024. The overall market in terms of volume is estimated to grow in line with Qatar's population growth as well as per capita consumption growth. Based on World Bank estimates, Qatar's population is estimated to grow at the rate of 1.7% annually until 2024. Thus, the overall market for processed vegetables is forecast to grow at a CARG of 5% between 2019 and 2024.

The hosting of the FIFA 2022 World Cup is expected to provide a one-time boost for the chips and crisps industry. It is estimated that approximately 3.1 million tourists are expected to visit Qatar during 2022 for the event which will last for a period of almost 1 month. The global average chips and crisps consumption of 11.7 Kg/annum (0.98 Kg/month) is considered as a benchmark. Thus, during the FIFA World Cup, an estimated 3,023 tons of additional processed vegetables will be consumed in 2022.



Chart 45: Processed Vegetables Per Capita Consumption, 2019



Source: Team analysis based on MOCI Data, PSA Data and Statista Report on Processed Vegetables

Supply Forecast

Domestic manufacturers have increased their market share from 2% in 2017 to 10% share in 2019. The local manufacturing of frozen potatoes, tomato pastes, pickles and packaged vegetables are key examples of strengthening of the domestic sector and promotion of import substitution. According to MOCI data, there are 3 new players that are in process of setting up new manufacturing facilities that will commence operations from 2021 onwards. Going forward, it is estimated that the share of domestic manufacturers will gradually increase by 2% each year from 10% share in 2019 and will achieve 16% share by 2022, further increasing to 20% market share by 2024.

Average price of domestic processed vegetables decreased at a CAGR of 0.3% between 2015 and 2019 while imports decreased by 1.2% during the same period. According to World Bank estimates, inflation for Qatar is estimated to range between 1.9% to 2.2% until 2024. For future growth estimates, the average price of domestic and imported processed vegetables has been estimated to grow at a similar rate of 2.1% per annum in line with World Bank inflation estimates for Qatar. Thus, the overall market in terms of value is estimated to grow at 10.2% between 2019 and 2024.

5.7 Demand Supply Gap Analysis

Qatar's processed vegetables market was estimated at 36,359 tons in 2019, while domestic installed capacity was estimated at 7,600 tons, thus indicating a shortfall in capacity of about 28,759 tons. According to MOCI data, there are 3 new players that are in process of setting up new manufacturing facilities (Nirvana Plant For Tomato And Ketchup Production, Shamus Products Factory and Kyo Fijian Wroclaw) which will add a total capacity of 3,650 tons from 2021 onwards, thus increasing the total installed capacity to 11,250 between 2021 and 2024. This represents a significant gap between domestic installed capacity and market demand. However, despite the significant gap, local manufacturers are likely to face stiff competition from processed vegetables imported from countries such as Netherlands, Spain, Italy, Turkey, Jordan, Lebanon and India in terms of pricing. Lack of domestic availability of fresh produce increases their dependence on costly raw material imports, thus rendering them cost ineffective as compared to imports. Since 2017, Qatar has increased its cultivation of crops to improve its self-sufficiency in growing its own fruits and vegetables. A strategy which local producers can adopt is focus on sourcing raw materials produced locally. The processed vegetables market is estimated to grow to 46,227 tons, valued at QAR 360 million in 2024.

5.8 Regulatory Analysis

The GSO 05 standard is concerned with frozen vegetables which are prepared for immediate consumption after the vegetables undergo appropriate manufacturing processes and before they are subjected to fast freezing process.

The following requirements shall be met in the final product:

1. Shall be prepared in hygienic conditions according to the GSO standard mentioned in Item (2.1).
2. Raw materials used in the final product should be complying with their relevant Gulf Standards.
3. Each vegetable component shall retain its physical properties, be homogenous in size.
4. Shall have a normal taste and flavor and free from any foreign taste or odor.
5. Shall be reasonably tender; uniform in texture and ripeness.
6. Shall be free from impurities and foreign materials, and all the stages of insect life cycle.
7. The proportion of each single vegetable ingredient shall not be less than 25 % of the total weight.
8. Shall be free from any added preservatives or artificial colors.
9. Microbiological limits shall not exceed the limits given in Gulf Standard mentioned in Item (2.2).
10. Contaminating metallic elements limit shall not exceed the limits given in Gulf Standard mentioned in Item (2.17).
11. Pesticide residues shall not exceed the limits given in Gulf Standards mentioned in Items (2.3, 2.4).
12. Radiation levels shall not exceed the limits given in Gulf Standard mentioned in Item (2.5)

Packaging

The following requirements shall be met in each package:

1. Shall be suitable; maintain the sensory characteristics of the product and its quality as well as prevent any contamination which may occur to the product that affect its properties and suitability for human consumption.
2. Shall be hermetically sealed, free from any physical defects which may lead to any change in physical properties of the products during manufacturing, storage and handling processes

Labeling

The following information shall be declared on the product:

1. Product type.
2. Ingredients.
3. Method of preparing the product for consumption (cooking method).
4. Nutritional value.
5. The phrase "store at -18 ° C".
6. Date of packaging and expiration date.





5.9 SWOT Analysis

Figure 15: SWOT Analysis of packaged vegetables

Strengths	Weaknesses
<ul style="list-style-type: none"> Processing of vegetables enables them to be stored and used over a longer period as compared to fresh produce. Rapid expansion of cold chain distribution infrastructure for vegetables in modern retail formats such as supermarkets and hypermarkets, thus driving demand for packaged and frozen vegetables. Well-developed storage and transportation infrastructure (air/sea cargo handling, cold storages, warehouses). 	<ul style="list-style-type: none"> Seasonal availability of vegetables and price fluctuations. Relatively small size of local cultivation of vegetables leading to dependence on costly imports. Consumer perception about low nutrient content and artificial flavors and colors in processed food
Opportunities	Threats
<ul style="list-style-type: none"> Local production of vegetables is on the rise. With consumers leading increasingly busier lifestyles, the convenience factor offered by packaged vegetables will drive this segment. Demand from diverse consumer groups for vegetables from various nationalities. Growing tourism driving the hospitality industry leading to increasing number of hotels and restaurants resulting in demand for vegetables. 	<ul style="list-style-type: none"> Consumer preferences for fresh vegetables instead of processed vegetables for health reasons. Major retailers extending their in-house brands into packaged and frozen vegetables. These are contract produced and occupy prime shelf space in their own stores.



5.10 Michael Porter's Five Forces Model Analysis - Packaged Vegetables

Figure 16: Michael Porter's Five Forces Model (Packaged Vegetables)





5.11 Critical success factors

Table 30: Critical Success Factors for Packaged Vegetables Business

Critical Success Factors for Packaged Vegetables in Qatar	
Name	Description
Access to raw materials	While local production of vegetables is on the rise in Qatar, the diverse population of Qatar and increasing number of tourists necessitates a wide range of vegetable offerings. Developing a network of suppliers from various geographies for ensuring wide range of products and managing the supply chain is important.
Packaging	Convenient packaging for vegetables that is re-sealable and usable in microwave is preferred by consumers. Increasing convenience by offering various package sizes and easy to cook vegetable mixes for preparing quick meal is important. Ensuring availability of vegetables in different mixtures and varieties, preserving freshness and nutritional contents is crucial.
Marketing	The HORECA and institutional catering segment depends on frozen vegetables for food preparation. It constitutes a significant segment and can use locally produced frozen vegetables to increase local vegetables consumption.
Quality Control	Modern retail stores are becoming a major shopping destination for consumers. Retailers are extremely particular about quality with respect to both taste as well as visual appearance. Thus, packaged vegetables need to be calibrated so that they appeal visually to the consumers by means of identical shape, size and colour.
Infrastructure	Requirement of warehousing and cold chain facilities and an excellent distribution network to reach the customers.

5.12 Future Outlook

- With changing lifestyles, consumers are increasingly opting for processed vegetables because of convenience, easy availability and not requiring additional effort in washing, peeling or chopping, thus helping in reducing overall cooking time.
 - Large working and young population will also drive the demand for processed vegetables in Qatar. The growth in organized retail chains, F&B outlets as well as the growth in hotels will drive the demand for contribute growth in demand for processed vegetables.
 - The government sees high potential in locally producing fruits and vegetables leading to increased demand for their processing as well. It is supporting the private sector participation in food production.
- The government has launched several initiatives including updating regulations, providing loans at low interest rates and campaigns for increasing visibility of locally produced products.
- The level of processing of vegetables into cut and packed or frozen or canned food items in Qatar is currently at very small and at its nascent stage given the limitations of cultivation of crops in the region. However, this sector is expected to grow at a steady rate, given the food security plans of the country to increase its self-sufficiency with regards to vegetables cultivation. As per PSA data on the Agriculture sector, Qatar's cultivation of vegetables increased from 55,583 tons in 2017 to 74,652 tons in 2018, thus indicating a significant annual growth of 34% in the amount of vegetables cultivated in the country.
 - With domestic production of vegetables on the rise, there is potential for local supply of value-added processed vegetables.



6. REGULATIONS CONCERNING FOOD PRODUCTION IN QATAR

The regulations and food standards are primarily derived from Qatar's Food Control Law enforced in 1990 . The law has a total of 35 articles covering the preparation, handling, packaging and importing of foods and food products in Qatar. The articles highlight the ideal conditions through which food is supposed to be handled and delivered to the customer. In the table below, key articles pertaining to strict guidelines and rules for food and beverage outlets have been highlighted.



Table 31: Regulations on Food Control

Select Articles on the Regulations under Qatar Law No. 8 of 1990 for Human Food Control		
Article	Description	Affiliated Authorities
2	<p>Actions would be taken in the event of:</p> <ul style="list-style-type: none"> • lack of alignment between the standard specifications declared by the laws and other related laws; • food being unfit for human consumption, harmful in any way to human health, contaminated or damaged; • food being frequently altered by any method, resulting in a change in its natural composition. 	<ul style="list-style-type: none"> • Ministry of Public Health • Ministry of Municipal Affairs and Agriculture • Ministry of Municipality and Environment (Baladiya)
3	<p>Food circulated would be considered harmful to human health when it:</p> <ul style="list-style-type: none"> • contains toxics beyond legal prescribed levels; • is contaminated with radioactive substances, microbes, parasites or pesticides; • is traded by person with infectious disease or microbes; • is mixed with dust or impurities that would be impossible to purify; • contains prohibited coloring, preservative or other material; • originates from an animal with disease or dead. 	<ul style="list-style-type: none"> • Ministry of Public Health • Ministry of Municipal Affairs and Agriculture
4	<p>Food shall be labeled unsuitable for human consumption if/when:</p> <ul style="list-style-type: none"> • microbial analysis reveals a change in the food's composition of its national properties (e.g., taste, appearance and smell); • date of expiry is not in line with the date of expiry label on the food and it has expired; • any insects, larva or animal residuals discovered; • unsanitary storage, production and preparation is seen. 	<ul style="list-style-type: none"> • Ministry of Public Health • Ministry of Municipality and Environment (Baladiya)
7	<p>To ensure the application of the provisions of the law, respective municipalities for both the ministries will inspect both foreign and locally prepared food in the following:</p> <ul style="list-style-type: none"> • markets, commercial and industrial shops; • means of food transport used for the transport of food, the stores and the warehouses; • public establishments and industrial facilities, regardless of total staff and capital. 	<ul style="list-style-type: none"> • Ministry of Public Health • Ministry of Municipality and Environment (Baladiya)
9	<p>Any establishment in the food trading, food preparation, locations and transport persons should strictly abide by the provisions of the law and its specifications and requirements.</p>	<ul style="list-style-type: none"> • Ministry of Public Health • Ministry of Municipality and Environment (Baladiya)

Source: <http://www.legal.gov.qa/LawArticles.aspx?LawArticleID=40736&LawID=2648&language=en>

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Qatar Development Bank (QDB) was founded by Emiri Decree to grow Qatar's private sector and diversify its economy. His Highness Sheikh Hamad Bin Khalifa Al Thani, the Father Amir, identified these as vital tasks in developing Qatar into a modern state. Since its establishment in 1997, QDB has been at the forefront of these efforts. It has worked with thousands of Qatari entrepreneurs and enterprises and has provided investment and guidance to brand-new start-ups and well-established corporations. QDB has built a reputation for identifying promising investment opportunities. Its focus is on growing SMEs in key sectors by offering several services via a single window to support expected growth. Through smart, targeted financing products and advisory support services, QDB is nurturing a sound and sustainable knowledge-based economy for Qatar.

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